THE

SCHOOL HOUSE:

ITS

ARCHITECTURE,

ARRANGEMENTS AND DISCIPLINE,

WITH ADDITIONAL

Papers on Various Subjects.

EDITED BY J. GEORGE HODGINS, M. A.

TORONTO:
PRINTED FOR THE DEPARTMENT OF PUBLIC INSTRUCTION FOR UPPER CANADA, BY LOVELL & GIBSON.
1858.

Presented by the Department of Public Instruction, U. C.

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THE SCHOOL HOUSE;

ITS ARCHITECTURE,

EXTERNAL AND INTERNAL ARRANGEMENTS,

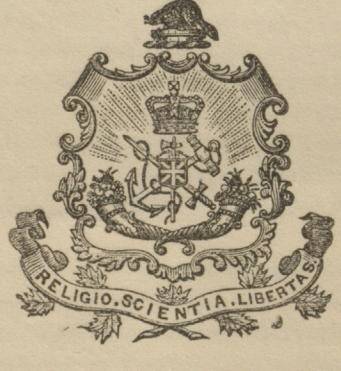
WITH ADDITIONAL PAPERS ON

GYMNASTICS, THE USE OF APPARATUS, SCHOOL DISCIPLINE, METHODS OF TEACHING, ETC., ETC.,

TOGETHER WITH

SELECTIONS FOR PUBLIC RECITATIONS IN SCHOOLS.

EDITED, BY AUTHORITY OF THE CHIEF SUPERINTENDENT OF EDUCATION FOR UPPER CANADA,
BY J. GEORGE HODGINS, M. A.
DEPUTY SUPERINTENDENT.



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PREFATORY NOTE.

In compiling the following pages, the editor has endeavoured to meet an obvious want, or rather many obvious wants, in the general economy and management of our public schools.

The subjects upon which he has sought to supply information are the following:

1. School Architecture—including plans for grammar, intermediate, and primary schools.
2. School Sites—the laying out, planting, and care of the school premises.
3. The various methods of warming and ventilating school houses.
4. The interior arrangements of the school-room, furniture, and seating, &c.
5. School Apparatus—with directions for its use and preservation.
6. Physical Training in Schools—with illustrations of gymnastics and calisthenics.
7. The School-room—its internal discipline and management.
8. The Teacher and his duties.
9. The Local Superintendent and his duties.
10. Selections in prose and poetry for public recitation in schools.

School Architecture.—Although a very gratifying improvement has lately taken place in the architecture of the school-houses in Upper Canada, yet much more remains to be effected, in order to render the rural or village school—what it ought ever to be—the most attractive spot in the neighborhood. The local school authorities indeed have sought to avail themselves of such information, in regard to the details of school architecture, as has been accessible to the Department. The people themselves also have evinced an anxiety to profit by the experience of other places in this matter, and applications have been frequently made to the Educational Department for Plans, Specifications, &c., to this end. In complying with these requests, as far as possible, school architectural engravings have been procured and published, from time to time, in the U. C. *Journal of Education.* These plans, with many additional ones (some of which are Canadian) have been collected and classified, and are now published together in the following pages.* Much additional information has also been incorporated in the accompanying letter press.

School Grounds; Warming, Ventilating, Seating, &c.—The same remarks apply in all respects to the chapters on the laying out of the school-grounds, and on the warming, ventilating, and seating of the school-rooms. The numerous engravings inserted will be of interest and value in the illustration of this important part of the subject.

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* For many of the illustrations in this work we are indebted to the courtesy of H. C. Hickok, Esq., Deputy Superintendent of Education, State of Pennsylvania, and to Mr. F. C. Brownell, Hartford, Connecticut.

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School Apparatus.—The facilities which the Department, through the liberality of the Legislature, has been enabled to offer to School Trustees for procuring apparatus, diagrams, and maps for their schools, have induced Trustees freely to avail themselves of the privilege, and to furnish their schools with these articles. The proper use and careful preservation of the apparatus have, therefore, become important matters of school economy. In the chapter devoted to this subject will be found embodied, it is believed, the result of much practical experience and intelligent discrimination.

Physical Training.—To this chapter we have devoted a large space, and illustrated it with a great variety of engravings. The importance of this branch of education is more and more felt every day. In Europe, especially, it has long held a prominent place in school discipline and instruction. In the Normal and Model Schools, Toronto, it has always formed an attractive and valuable feature in the ordinary exercises of these Institutions.

School Discipline.—To aid the teacher in the discharge of this, perhaps the most delicate and difficult part of his duty, we have sought to make such a selection of authorities as will render the exercise of school discipline more certain and easy. The suggestions and advice of the best educators on this subject may, however, be summed up in these three words: kindness, firmness, and patience.

Teaching.—Effective teaching is a great art; and where the gift is not a natural endowment, it can only be acquired by diligent labor and by consulting the best authorities. To aid in the acquisition of this most essential qualification, we have inserted a separate article on the teaching of each of the various elementary branches of learning. The whole will be found valuable for reference.

Inspection of Schools.—The frequent change of Local Superintendents seemed to render it desirable that the suggestions of the Chief Superintendent of Education on this subject should be arranged in a convenient and accessible shape for these officers; they have, therefore, been embodied in the work, together with the suggestions of the head master of the Normal School, (who is himself an experienced Inspector.) These papers give also unity and completeness to a compilation designed to form a convenient book of reference on various subjects relating to the discipline and economy of the schools.

Selections for School Recitations.—This feature of the work has been added to meet a want much felt in many of the schools. Too frequently the master, —anxious to give variety and interest to the routine duties of the week, and to cultivate a taste for correct speaking and recitation,—has had no choice but to select either inappropriate pieces, which possessed no interest for the pupil, or those which, otherwise beautiful in imagery and eloquent in language, embodied political sentiments and opinions, the very reverse of those which should be imbibed by young Canadians who, otherwise, should be taught to love and venerate that great fatherland, whose annals are so rich in heroic incident and noble achievement. To aid the teacher in his selection for these exercises, we have inserted a threefold series of extracts in prose and verse. In performing this duty we have sought to give a Canadian and national cast to the entire series. We have also had in view the various ages and capacities of the pupils. Short

pieces have been added for the younger pupils; and we have even ventured to insert, towards the close, a few pieces of poetry designed exclusively for girls, where the mistress of a school may wish to cultivate the taste of her pupils in this particular.

The *first series* of the extracts is taken entire from various Canadian speeches and addresses, which have appeared from time to time in the *Journal of Education* and other papers. The selection would have been more varied had the editor been able to procure additional materials. The names of the chief speakers,* from whose addresses extracts are made, and the local interest which naturally attaches to the speeches themselves, independent of their intrinsic merit and the forcible and eloquent language employed, are a sufficient guarantee that this feature of the work will prove highly attractive and popular in the schools. The editor has to apologise for the insertion, at the close of the first series, of two extracts from an address prepared by himself, added simply with the view further to enlist the sympathies of the pupils in the prosperity and success of our national school system.

The *second series* consists of extracts from recent speeches and addresses by various statesmen in England and other persons.

The *third series* includes a selection of poetry which has appeared in successive volumes of the *Journal of Education*. A few additional pieces have been added, as well to afford sufficient variety as to embrace in the selection, as far as possible, extracts from the standard poets in our language.

The editor acknowledges many imperfections in this compilation, owing to the interference of other duties. The work has by degrees grown upon his hands, and has exceeded the original limits assigned to it; but it was thought desirable to omit nothing materially affecting our school economy and discipline, which might prove useful or suggestive either to trustee, teacher, or local superintendent, in the prosecution of the great work in which we are all so deeply engaged, and on the successful accomplishment of which, under the Divine blessing, our prosperity and advancement as a people so largely depends.

January, 1858.

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* Lord Elgin, Sir J. B. Robinson, Rev. Dr. M'Caul, Rev. Dr. Ryerson, Hon. W. H. Blake, Dr. Dawson and the Rev. Wm. Ormiston, A.M.

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PERSPECTIVE VIEW OF THE NEW BRICK SCHOOL HOUSE, SIMCOE, COUNTY OF NORFOLK.

(*For Description and Ground Plans, see page* 211.)

SCHOOL ARCHITECTURE.

The following plans of the exterior and interior of the Normal and Model Schools for Upper Canada, are inserted in this edition of School Architecture, &c., as that Institution, in architectural design and adaptation to the end proposed, stands at the head of all others in the Province connected with the Educational Department. The interior arrangements are also sometimes referred to in the plans which follow:

DESCRIPTION OF THE BUILDINGS.

The Normal and Model Schools and Education Offices for Upper Canada—erected A.D. 1852—are situated upon the centre of an open square of about seven acres and a half of ground, bounded on the north by Gerrard Street, on the east by Church Street, on the south by Goold Street, and on the west by Victoria Street, in the City of Toronto. The distance from the bay is about three-quarters of a mile. The situation is a very beautiful one, being considerably elevated above the business parts of the city, and commanding a fine view of the bay, peninsula, and lake.

In a building of so great an extent, it appeared to be neither desirable nor expedient to adopt a rich or highly finished style of embellishment. The whole has been designed with a view rather to utility than for effect; care being taken, however, to maintain that fitness of decoration by which the purpose and importance of the institution may be characterized and upheld.

The principal Normal School building, as seen in the perspective, fig. 1, is 184 feet 4 inches frontage, by a depth on the flanks, east and west, of 85 feet 4 inches.

The front is in the Roman Doric order of Palladian character, having for its centre four pilasters of the full height of the building, with pediment surmounted by an open Doric cupola, of the extreme height of 95 feet. The principal entrance (to the offices of the Educational Department, &c.) is in this front; those for the male and female students being placed on the east and west sides respectively, C and D in fig. 3. In the centre of the building is a large central hall (open to the roof, and lighted by a lantern), with a gallery around it, at the level of the upper floor, at B, in fig. 4, approached on the lower floor by three corridors—south, east, and west—and opening on the north to the theatre, or examination hall.

Fig. 2 gives a perspective view of the Model School in front, and of the Normal School in the rear. A Model Grammar School, to be placed in front of the present Model Common Schools, is now in process of erection, and, by its more imposing exterior and greater height, will produce a better effect,—viewed from the point presented in the perspective now given.

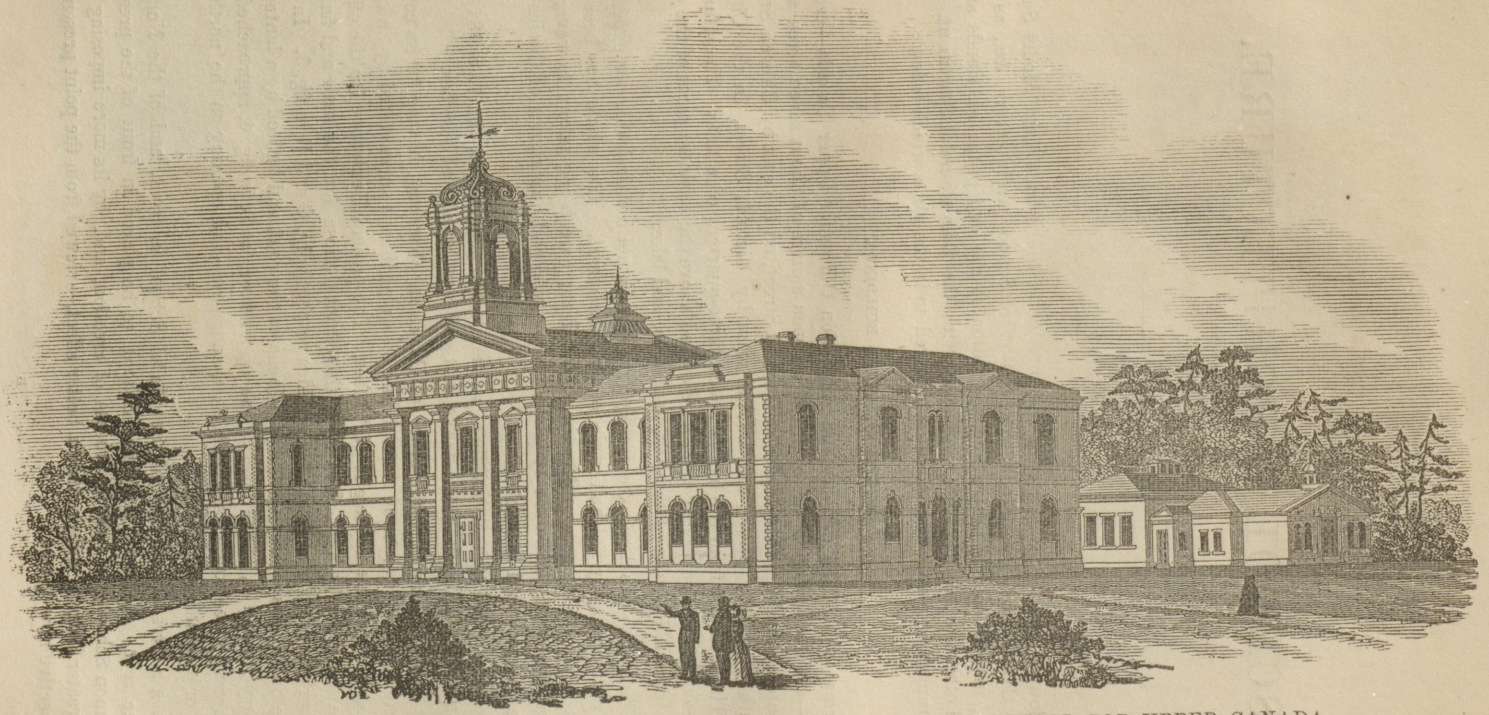


FIG. 1.—PERSPECTIVE VIEW OF THE EDUCATION OFFICE AND NORMAL SCHOOL FOR UPPER CANADA.

(THE SMALL BUILDINGS IN THE REAR ARE THE MODEL SCHOOLS.)

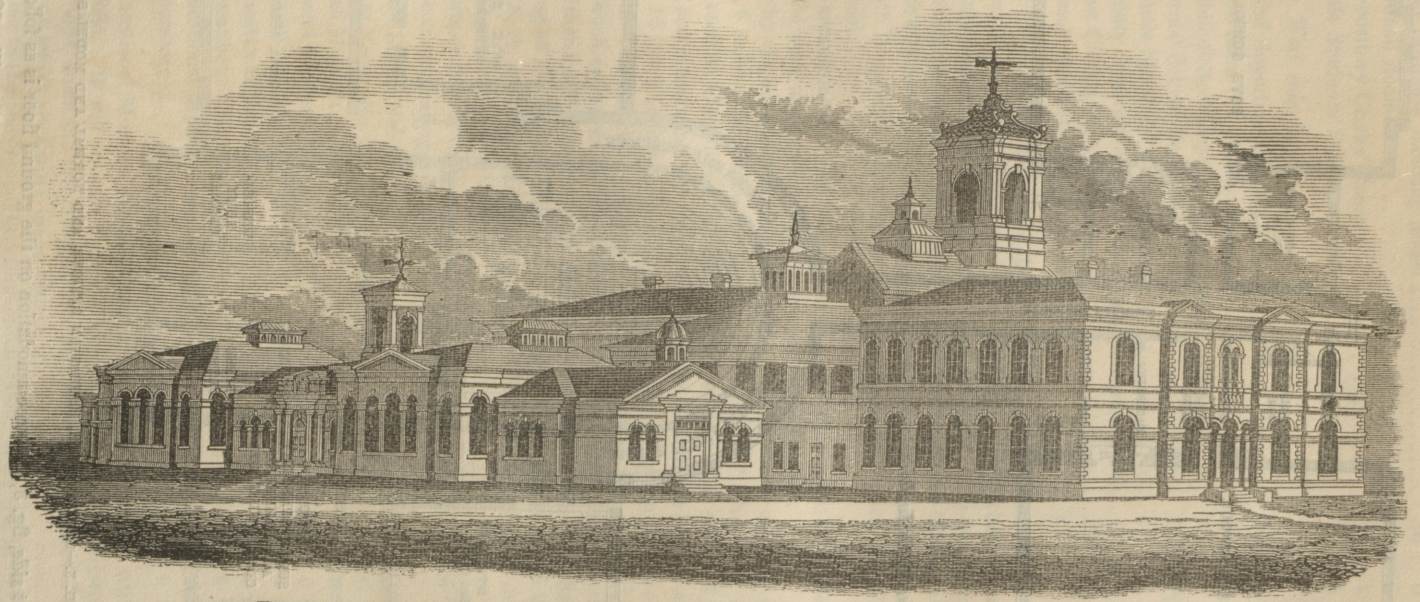


FIG. 2.—REAR PERSPECTIVE OF THE NORMAL AND MODEL SCHOOLS, TORONTO.

(THE MODEL SCHOOLS ARE THE SMALL BUILDINGS IMMEDIATELY IN FRONT.)

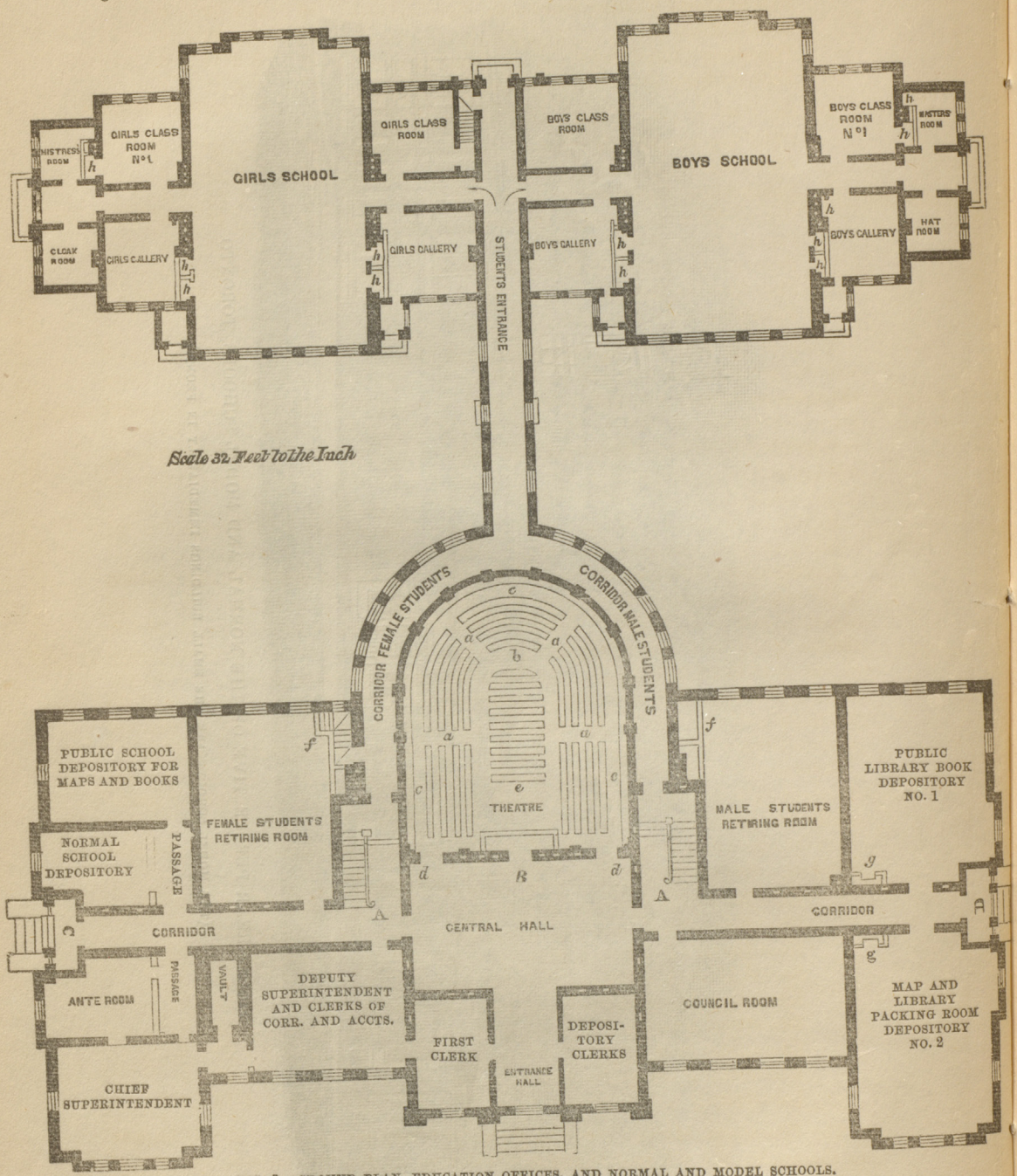


FIG. 3.—GROUND PLAN, EDUCATION OFFICES, AND NORMAL AND MODEL SCHOOLS.

On the East side, fig. 3, the accommodation on the ground floor is as follows:—

Public Library Book Depository, No. 1	36′ : 0″	x 28′ : 0′
Packing Room Depository, No. 2	36 : 5	x 8 : 0

Male Students' Retiring Room	36 : 0 x 30 : 0
Council Room	39 : 0 x 22 : 0
Depository Clerks' Room	22 : 8 x 14 : 8
Male Students' Staircase, A	17 : 6 x 11 : 0

On the West side, fig. 3:—

Chief Superintendent's Office	28' : 0" x 21' : 0"
Ante-room	22 : 0 x 14 : 3
Public School Depository for Books and Maps	28 : 0 x 21 : 0
Normal School Depository	22 : 8 x 15 : 8
Female Students' Retiring Room	36 : 0 x 26 : 10
Deputy Superintendent's Office, with fire-proof vault	37 : 11 x 22 : 0
First Clerk's Office	22 : 0 x 14 : 3
Female Students' Staircase, A	17 : 6 x 11 : 0

North of the central hall is the theatre, with Lecturer's entrance in in the centre, *B* and side entrances east and west, *d*, *d*, for male and female students respectively. Here the aisles are marked *a*, *b*, and *c*, with seats arranged between them; the Lecturer's platform being placed between *B* and *e*. This portion of the theatre is designed to accommodate 470 persons, and the galleries 150, making in all 620. Around the theatre, and beneath its gallery, are east and west corridors, by which the students enter the Model School.

By this arrangement it will be seen that, except when actually in the presence of the masters, the male and female students are entirely separated.

Passing by the corridors last named to the Model School, which is 175 feet 6 inches, by 59 feet 6 inches, the students enter the boys' and girls' schools by doors to the east and west, each of which has a large school-room at its centre, 56 feet 6 inches ⋈ 33 feet, capable of accommodating 200 children, with four smaller class rooms adjoining it, about 17 feet ⋈ 15 feet 6 inches each. The boys' and girls' entrances (like those of the students of the Normal School already described) are at the east and west ends of the building—such entrances having each a hat and cloak room and masters' or mistress' room on either side. These schools therefore will together accommodate 400 children.

Returning to the Normal School, and passing to the upper floor, on the landing of the staircases A, A, are entrances to the gallery of the theatre, which is designed to accommodate 150 persons.

On the upper floor is the central hall, with its gallery B, connecting the east and west corridors, communicating with the following rooms:—

Class Room, No. 1	56' : 0" x 36' : 0"
Class Room, No. 2	56 : 0 x 36 : 0
Head Master's Room	22 : 0 x 19 : 5½
Second Master's Room	22 : 0 x 19 : 5½
Educational Museum, No. 1	42 : 0 x 22 : 0
Educational Museum, No. 2	39 : 5 x 22 : 0
Educational Museum, No. 3	32 : 8 x 28 : 0
Educational Museum, No. 4	45 : 2 x 28 : 0
Laboratory	21 : 6 x 12 : 0

The Educational Museum is now in process of arrangement, and will shortly be open to the public. It will contain copies of paintings by the old masters; and casts of statues, groups, busts and statuettes, ancient and modern; specimens of Canadian natural history; and school apparatus, maps, charts, globes, &c.

In addition to the accommodation thus enumerated, there are, in the basement, rooms for the residence of the Janitor, together with furnace rooms, from whencewarm air is

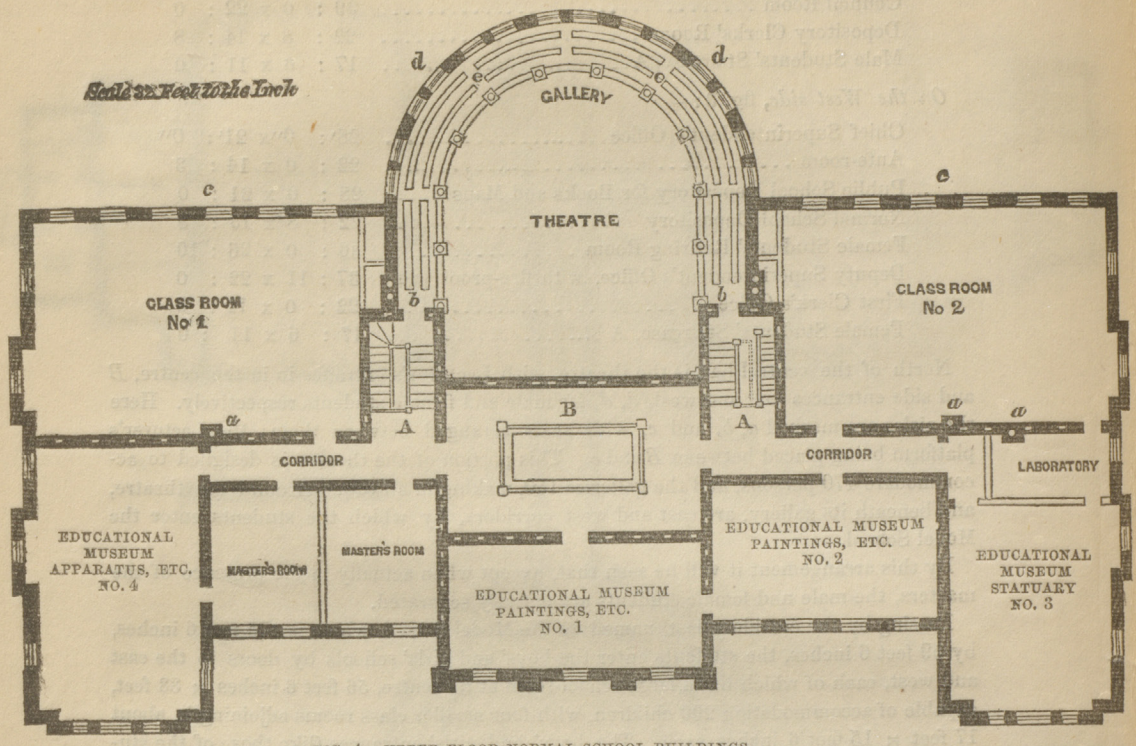


FIG. 4.—UPPER FLOOR NORMAL SCHOOL BUILDINGS.

served to the whole building. Great attention has been bestowed upon the efficiency of the warming and ventilating apparatus, and the system adopted has been highly successful. The building is rendered almost fire proof, being entirely covered with slate and tin, and detached. The means for extinguishing a fire, should any occur, are considered ample—there being six hydrants, (three inches in diameter each) three in the east wing, and three in the west wing.

We now insert such plans and illustrations of School Architecture as are in the possession of the Department, grouping them in the following order:

1. Plans for Grammar, Union, or Superior Common Schools.
2. Plans for Common Schools in Villages and rural sections.
3. Plans for laying out the Ground and School Premises; Trees, Shrubberies, &c.
4. Plans for interior of the School-house: Heating and Ventilating.
5. Plans for interior of the School-house: Seating, &c.
6. Illustrations of out-door Amusements, Gymnastics, &c.

PART I. PLANS FOR GRAMMAR, UNION, OR SUPERIOR COMMON SCHOOLS.

In the selection of sites and the erection of School-Houses, Trustees should have special regard to the following remarks and suggestions:—

1. The sites should, where practicable, be fixed in an agreeable and cheerful neighborhood, apart from railways, mills, factories, &c. The position should be somewhat elevated, or on a gentle slope, and not in the vicinity of low ground or stagnant water.

2. The door should face the south, and the principal windows be to the north, thus rendering access to the School-House agreeable at all seasons, and the light inside always free from the glare of sunshine.

3. The ground should be planted with trees, so as to provide a shade for the building and play-ground, and not leave both exposed, as is too often done, to the fierce heat of summer and the storms of winter. The grounds should also be nicely laid out, and shrubs and flowers planted where practicable, so as to promote in children a taste for neatness, order, and beauty.

4. The proper and economical heating and ventilation of the building should also be and Toronto.—(See illustrations in Part 4.)

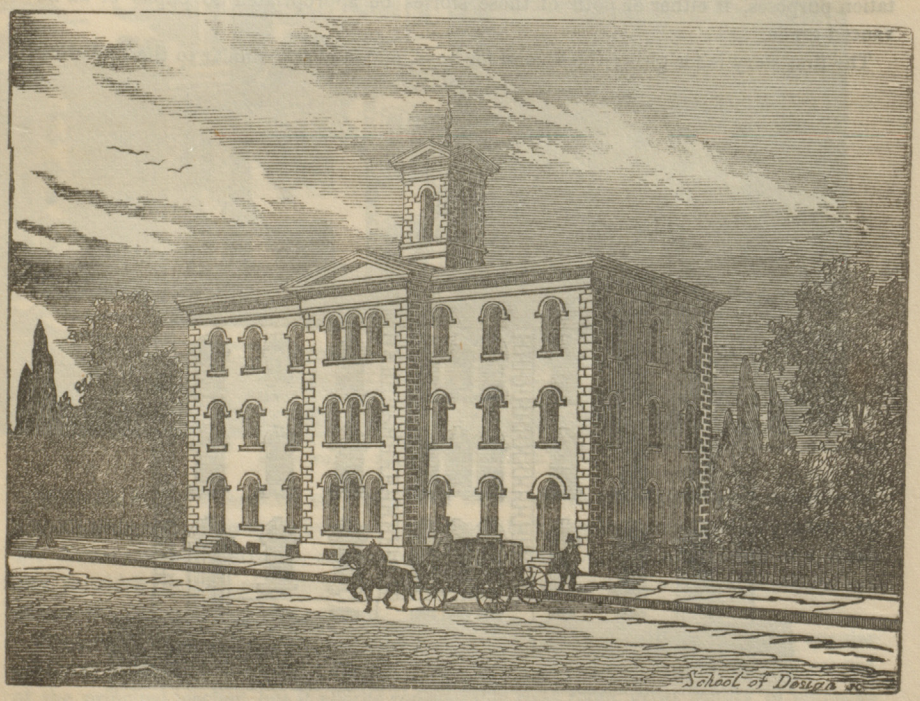
5. The School-room should be provided with comfortable seats and desks. These can now be easily procured at the school furniture manufactories in Oshawa, Markham, carefully studied.—(See illustrations in Part 5.)

6. When the School-House is thus prepared and ready for occupation, maps and apparatus, and a good teacher should be procured,

For the following plans and illustrations, we are in part indebted to H. C. Hickok, Esq., Deputy Superintendent of Public Instruction in the State of Pennsylvania, to the Hon. Mr. Barnard, and to other gentlemen:—

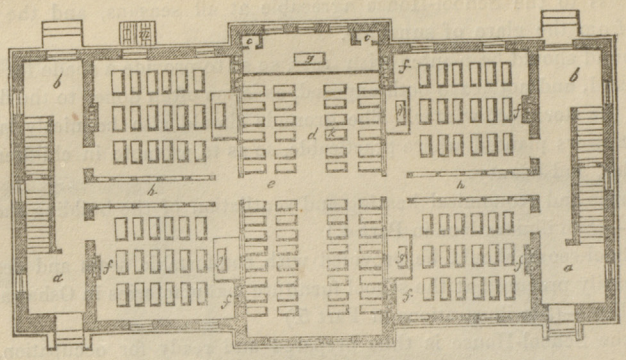
Plan No. 1.—For 500 Pupils.

This building is three stories high, and is designed to accommodate 750 pupils—250 on each floor. Unless in very rare cases, a School Building should not exceed two stories in height. In all the passages and school rooms, the doors should open outward, (not inwards, as is generally the case,) so as to admit of easy egress in case of fire, accident, &c.



PLAN NO. I.—FRONT PERSPECTIVE.—FIG. 1.

The plan of its first and second floors is as follows:—



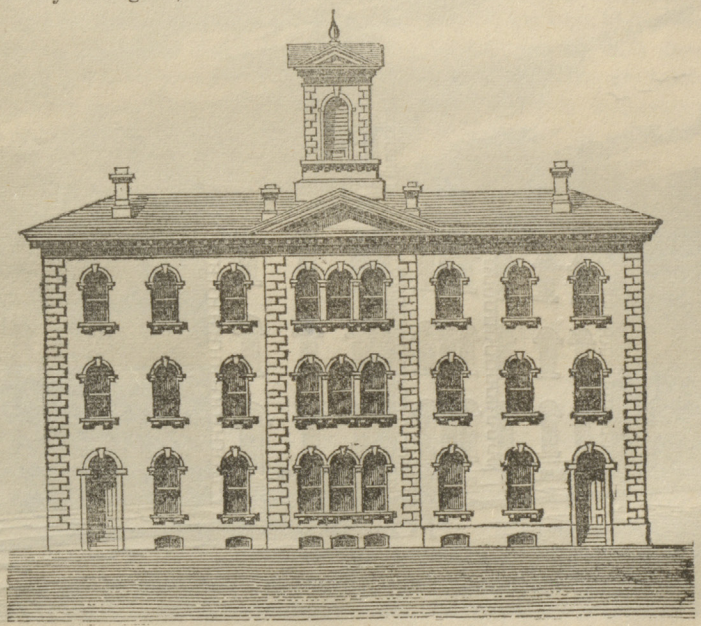
PLAN NO. 1.—FIRST STORY FLOOR.—FIG. 2.

a. Boys' entrance and stairs to second and third stories.
bb. Girls' entrance and clothes rooms.
cc. Closets on the teachers' platforms.
d. First Master's class room and passage 3 ft. wide.
e. First Master's class room and passage 3 ft. wide
f. Flues for warm air or gas, and ventilation.
g. Master's Desk.
hh. Passage three feet wide.

The four corner rooms on each floor are, in effect, class rooms, the main room in the centre being the principal school-room, under the constant supervision and control of the first Master.

Under this system of government and instruction, for which a glazed partition throughout, and the wide central passages, afford full facilities, each story would require five Teachers—a master and four assistants—and each would thus constitute one large School. The two class rooms on the second story will be found very suitable for recitation purposes, if either or both of those stories be appropriated to pupils of an advanced grade.

The first story is for girls; the second for boys, and is nearly similar to the first story.



PLAN NO. I.—REAR ELEVATION.—FIG. 3.

both open directly into the yard at the back of the building, and neither of them into the street; but a gate should lead from them to the street.

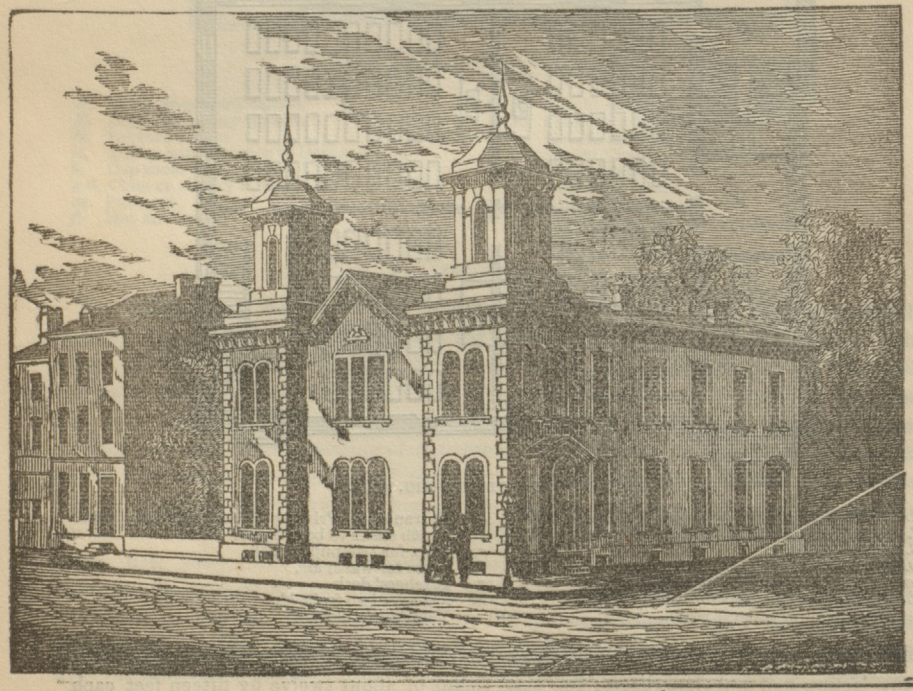
SPECIFICATION.

This plan represents a building forty-seven by ninety-two feet; three stories high, first and second fourteen and third thirteen feet each in the clear; pitch of roof seven feet, and height of the first floor two feet six inches.

This building is three stories high, divided into class rooms, separated by glass partitions, the first story being for girls, and the second for boys. It is intended to be of stone and stuccoed; but if brick is more economical, it would answer equally well.

In this building the two transverse partitions are to be supported by piers in the cellar, the girders to bear on the top of the piers and the walls of the flank; and the joists, arranged longitudinally, to be doubled under the other glass partitions. If the building should be built of stone, the walls will be—cellar 24, first story 22, and second 20 inches thick; but if of brick, they will be respectively 24, 22, and 18 inches thick. The doors and window sills, and the platforms and steps, are to be of cut stone.

Plan No. II.—For 350 or 400 Pupils.



PLAN NO II.—FRONT PERSPECTIVE.—FIG. 1.

With the changes hereafter suggested, this house will be found to be very suitable for a small town with from three hundred and fifty to four hundred pupils of all grades; or the forward or other division, containing the same number, in a larger town or a small city, in which the plan of having the schools of each part separate from the others, but still on the Union system, is preferred.

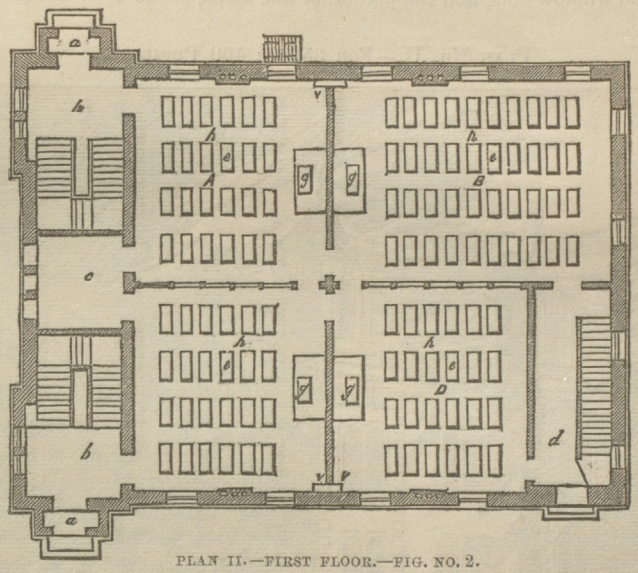
The general idea of the plan is admirable. It provides not only for the three regular grades of Schools in the same building, all so arranged as to be within the full control of the principal teacher, but it affords considerable class room, great facility of entrance

and egress, and a fine large lecture hall. These are all very desirable qualities. In the details, however, it slightly fails; but it can be readily improved, both in capacity and arrangement, with little trouble and no increase of cost.

There is no actual nenecessity for the third or back stairway. The space occupied by it, if thrown into the girls' Primary School, will make it of equal capacity with that of the boys'. Each of these rooms will then be about twenty-five feet by thir-ty-five. This will readily seat two hundred Primary pupils——one hundred in each room. The Superior School rooms are about twenty-five feet square; a space which will seat from thirty-five to forty pupils of that grade in each room.

To secure readiness of entrance to the Primary Schools, there should be an outside door to each, opening through a small entry or clothes room. These doors had better

The second story also admits of some desirable changes. The two Secondary Schools may be placed across the back part of the building over the Primaries, each being of sufficient size to seat about sixty pupils; the partition between them should also be of glass, to correspond with the first story.



PLAN II.—FIRST FLOOR.—FIG. NO. 2.

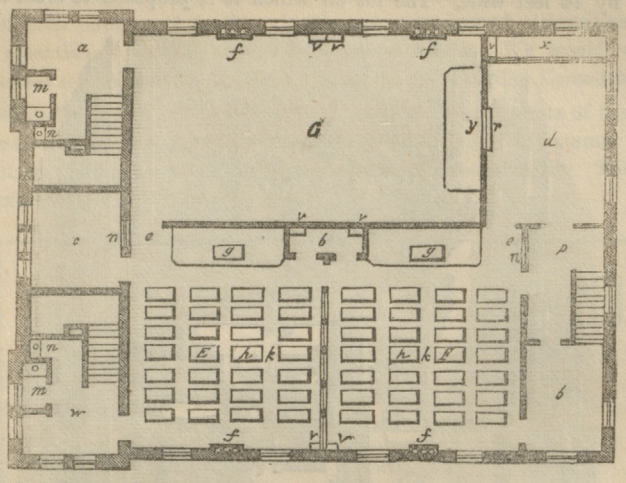
A. Girls' intermediate or Superior School room.
C. Boys' intermediate or Superior School room,
B. Boys' Primary.
D. Girls' Primary.
aa. Outside Porches for boys and girls.
bb. Cap and cloak rooms for boys or girls.
c. Teacher's' or gallery, room.
d. Entrance to Primary School and cap room with stairs to boys' upper room.
e. Seats for two pupils each.
f. Flues for warm air.
g. Teachers' desk.
h. Passages two feet wide.
v. Ventilating flues.

The remaining portion of the second story, next the stairs, will then become applicable to the lecture hall and class rooms; two class rooms of about twelve by fifteen feet each being taken off one end of this space.

The lecture hall will be about thirty by forty feet, and as it will never be occupied when the Schools are in session, the doors to the secondary and class rooms may open into it. By this arrangement, also, the class rooms will be readily accessible both to the Superior and Secondary Schools, in connection with which they will be chiefly used.

Thus the same space will be made to accommodate a larger number of pupils and in better proportion to the numbers and wants of each grade, than as set forth in the plans above given. The cost of the third stairway will also be saved, and will defray the expense of the alterations just specified.

If, however, the plans as given are preferred, the following are the specifications prepared to accompany them, without embracing any of the changes above recommended.



PLAN II.—SECOND FLOOR.—FIG. NO. 3.

E. Girls' Secondary School.
F. Boys' Secondary School.
G. Lecture Room.
a. Lobby and entrance to lecture room.
b. Cap room for boys.
c d. Class or gallery rooms.
ee. Passages.
f. Hot air flues.
g. Teachers' Desks.
h. Seats for two pupils each.
l. Closets for books, &c.
mm. Water Closets.
nn. Wash basins.
vv. Ventilating flues.
w. Girls' clothes room.
x. Closet for library and apparatus.

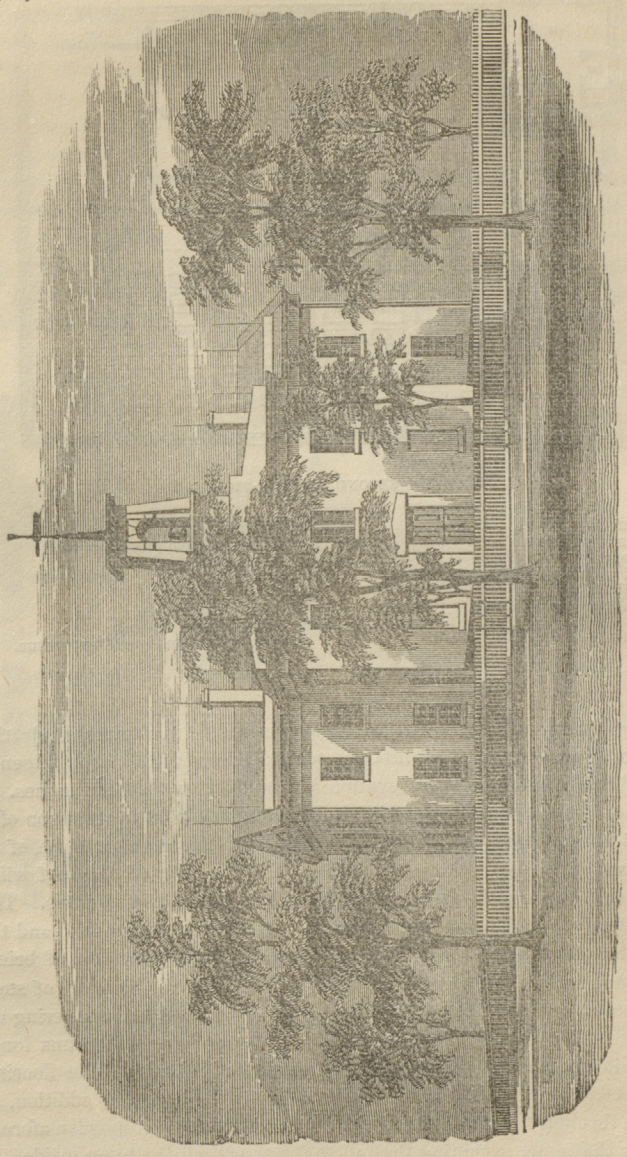
SPECIFICATION.

The building will be fifty-five by seventy-six feet, with two towers projecting slightly from the line of the building. The first and second stories will be each fifteen feet in the clear; pitch of roof nine feet; and elevation of first floor two feet six inches. The walls will be of stone, stuccoed on the exterior and laid off in blocks in imitation of cut stone. The eave and cornice and cupola, from the level of the eave, will be of wood, and painted and sanded in imitation of cut stone. The covering of the roof will be of tin, as also the base of the cupola and roof of the same, and of the porches. The exterior walls in the cellar will be twenty-four inches, the first story twenty-two, and the remainder twenty inches thick; the walls forming the front stairways will be of brick, thirteen inches first story, nine inches second. Piers will be built in the cellar of stone or hard brick, for the support of the iron pillars, 27 inches at the base, and tapering upwards to 18 inches at the top, for the support of the glass partition which runs longitudinally through the building, and for the support of the floors of joists. The flooring joists of the first and second stories will be three by fourteen inches; and in addition, a camber-rod will be run through them. The roof will be constructed as in the plan aforesaid. The window frames the same, excepting that all the shutters will be hung inside.

This building will require three flights of stairs, with wall rail, &c. The glass partition in the first story will also require iron posts. The partition separating the girls' and boys' superior School room in the second story, will also be of sash, without the iron posts. The partition forming the lecture rooms, and all others, will be three by six inch scantling. A water closet and wash basin for the accommodation of the girls of the superior School, and also one of each for the teachers will be constructed where shown in the plan, and connected with sufficient and properly constructed sinks or wells.

Plan No. III.

The building next represented is 70 feet long by 40 feet wide; with a front projection, 28 feet long by 14 feet wide. The lot on which it is proposed to erect the building,



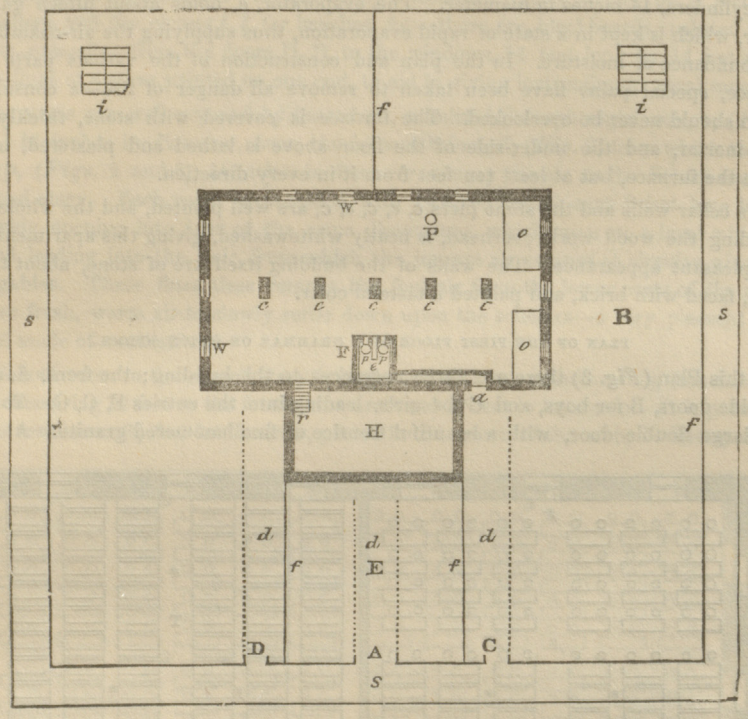
PLAN NO. III.—FRONT PERSPECTIVE, WITH TREES, ETC.—FIG. I.

should be from 150 to 200 feet long, and from 150 to 200 feet wide. They should be corner lots, if possible, and have large open spaces around them. The school-houses should be protected by small lightning-rods (as seen in the engraving, and each building furnished with a school-bell, which could be heard in the remotest part of the town, village, or section.

As seen in the engraving, the building should be surrounded by umbrageous elm, maple, and lime trees—thus giving an air of shade and coolness to the otherwise ex-

posed situation of the building in summer, and relieving the bleakness of the general aspect of the comparatively isolated school-house lot in winter. It is greatly to be regretted that, in little matters of this kind, involving so much the comfort, cheerfulness, and happiness of both pupils and teacher, in the naturally heated atmosphere of a school room, more attention is not paid to the interests of health. We would earnestly commend the matter to the attention of School Trustees and Building Committees.

Before proceeding to an explanation of the interior arrangements of the building, we present a general view, on a reduced scale, of the ground plan of a Grammar School-house already built, including the cellar, yards, fences, gates, side-walks, &c. This will be seen in the annexed figure.



BLOCK PLAN OF GROUNDS, ETC., OF PLAN NO. III. FOR A GRAMMAR OR UNION SCHOOL.—FIG. 2.

The grounds around the Grammar School-house, as given in this block plan, contain from 18,000 to 20,000 square feet, or between one-third and one-half of an acre. These grounds are enclosed, and divided into two separate yards and a lawn, by substantial close board fences, *f, f, f, f, f* (*Fig.* 2), 6 feet high, neatly made, and painted white. The boys' play-ground, B, and the girls', G, are large; but the lawn, E, is small, and is planted with trees and shrubbery. The gravelled side-walks, *s*, *s*, *s*, running on three sides of the lot, are shaded by rows of elms, maples, and lindens, set near the curb-stones. The gates, A, C, D, and the gravelled walks, *d*, *d*, *d*, lead to the front and the two side-doors of the School-house. The out-buildings, *i*, *i*, are arranged with a large number of separate apartments on both sides, all well ventilated, each furnished with a door, and the whole surrounded with evergreens.

In the plan of the projection, H, the stairway, *r*, leads to the cellar, which is 7 feet in the clear, and extends under the whole of the main building. The cellar is well lighted, having eight windows, *w*, *w*, with ten panes of 7 by 10 inch glass. The windows, being

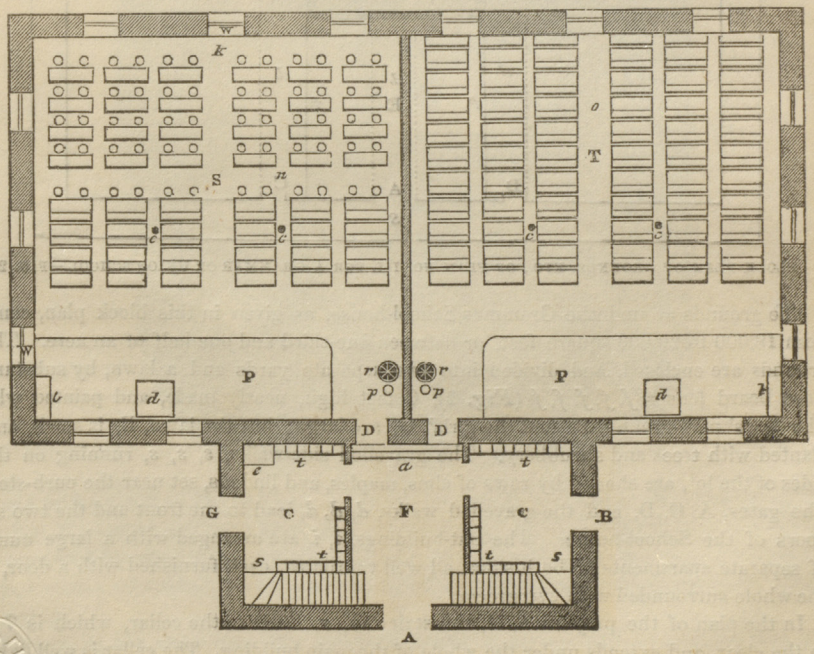
hung with hinges on the upper side, and fastened with hooks and staples at the lower edge, may be opened by raising them into an horizontal position, where they are fastened with hooks as when closed. With this arrangement it is easy to keep the cellars well ventilated at all seasons. The openings for the admission of fuel into the boxes, *o*, *o*, are furnished with sheet-iron shutters, fastening on the inside. The school-house is provided with an abundant supply of good water, obtained from a fountain or from a well, which is generally outside the building, the water being brought in by a pump, P. A supply of good water for a school-house should not be considered merely as a convenience, but as absolutely necessary.

The horizontal section of the furnace, F, merely shows the ground plan. The cold air passes through *a* to the air-chamber, where it is warmed by the fires in *p*, *p*,—two cast-iron cylinders, 14 inches in diameter. The evaporator, *e*, holds about fifteen gallons of water, which is kept in a state of rapid evaporation, thus supplying the air-chamber with an abundance of moisture. In the plan and construction of the various parts of the furnace, special pains have been taken to remove all danger of fire—a consideration which should never be overlooked. The furnace is covered with stone, thickly coated with mortar, and the under-side of the floor above is lathed and plastered, not only above the furnace, but at least ten feet from it in every direction.

The cellar walls and the stone piers *c*, *c*, *c*, *c*, *c*, are well pointed, and the whole inside, including the wood work overhead, is neatly whitewashed, giving this apartment a neat and pleasant appearance. The walls of the building itself are of stone, about two feet thick, faced with brick, and painted a tasteful color.

PLAN OF THE FIRST FLOOR OF A GRAMMAR OR UNION SCHOOL.

In this Plan (*Fig.* 3) there are three entrances to the building; the front, A, and the two side doors, B for boys, and G for girls, leading into the entries F, C, C. The front is a large double door, with a beautiful frontice of fine hammered granite. At all the



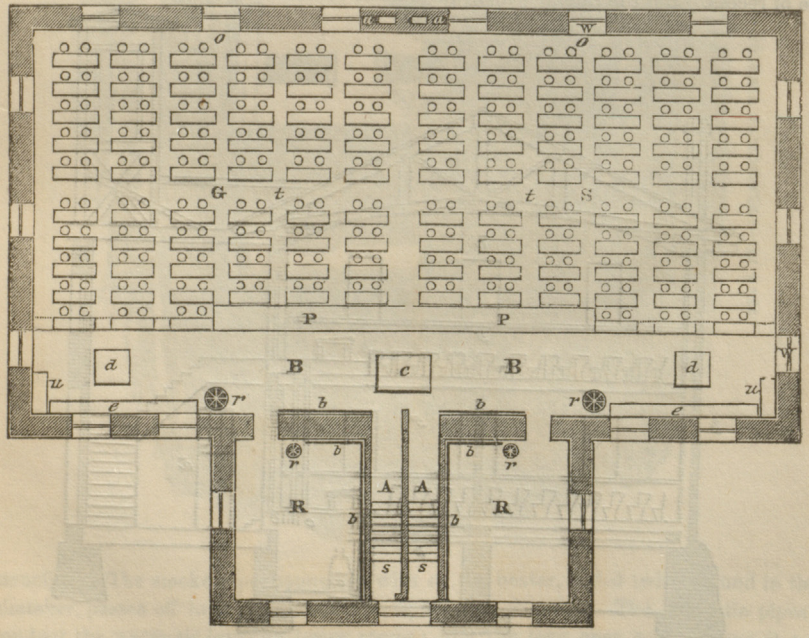
PLAN III.—FIRST FLOOR.—FIG 3.

outside doors are two or three hewn granite steps, furnished with four or six scrapers at each door. Pupils belonging to the Schools in the lower story, pass from the side entries into the middle one, and ascending two steps at *a*, enter their respective rooms T, S, which are rather larger than those in the primary and intermediate School houses, being 36 feet by 32 feet inside, and 11 feet high in the clear. In each of the entrances C, C, there is a provision *t*, *t*, *t*, *t*, for setting up umbrellas.

The seats and desks in the rooms T and S, are of the same dimensions and arranged in the same manner as those in the primary School-house described at length on the 13th page of the *Journal* for January, 1849. A section of these seats and desks may be seen in *Fig.* 5. The small iron posts *c*, *c*, *c*, *c*, about 2½ inches in diameter, supporting the floor above, are placed against the ends of the seats, so as not to obstruct the passages at all. Besides the platforms P, P, 20 feet by 6 feet—the tables, 3 feet by 4 feet, for the Teachers, and the closets *l*, *l*, for brushes, &c.—there are blackboards, painted upon the walls, extending from the doors D, D, to the windows, 14 feet long by 14 feet wide, with the lines of a stave painted on one end, to aid in giving instruction in vocal music.

These rooms are well warmed by heated air, admitted through registers *r*, *r*, (*Figs.* 3 and 4,) 18 inches in diameter, from the furnace below, F, (*Fig.* 2, from which the tin pipes *p*, *p*, (*Figs.* 2 and 3,) 14 inches in diameter, convey the air to the School-room in the second story. Each room is provided with two ventilators, each 3 feet long by 15 inches wide, opening into flues of the same dimensions, which open on a level with the floor, and leading into the attic, from which the impure air escapes at circular windows in the gables. These flues thus remove the foul air from the lower parts of the room and cause fresh, warm air to slowly settle down upon the scholars—a very pleasant and healthful mode of ventilation.

The School room in the second story is large, and with an arched ceiling (see Section, *Fig.* 5) measuring 12 feet to the foot of the arch and 17 feet to its crown. It is provided with two ventilators 3½ feet in diameter, placed in the crown of the arch, 20 feet apart.



PLAN IV.—THE SECOND STORY OF A GRAMMAR OR UNION SCHOOL, ETC.—FIG. 4.

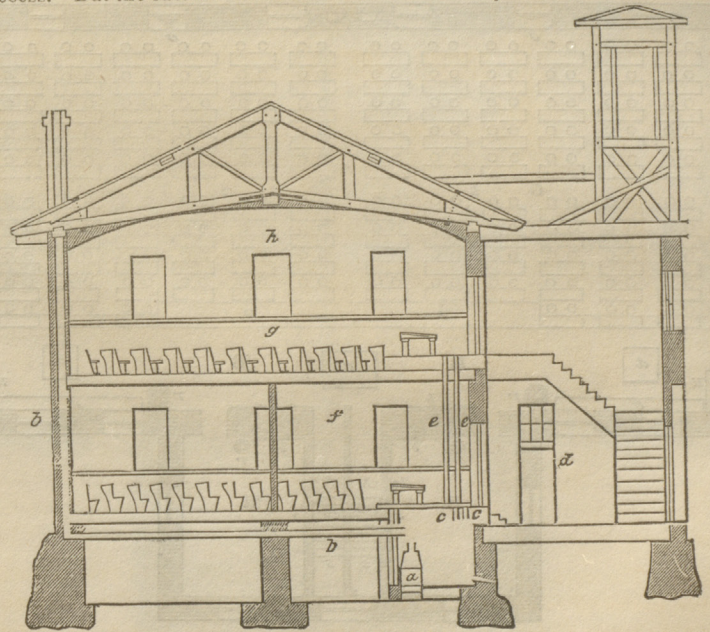
The entrances to the second story School room are by two short flights of stairs on a side; from the lower entries to *s*, *s*, (*Fig.* 4,) spaces about 3 ft. square, and thence to A, A, spaces 3 x 5 ft., extending from the top of the stairs to the doors opening into the School room.

The Master's table *c*, as well as the tables *d*, *d*, for the Assistants, are moveable. The large area B, B, being 14 inches above the floor of the room, is 8 feet by 64 feet long. with large closets *u*, *u*, at the ends, filled up with shelves, &c., for the use of the Teachers

The School room and the recitation rooms R, R, are warmed by heated air, admitted at the registers *r*, *r*, *r*, *r*, *r*, all of which are connected with the furnace in the cellar, by large tin pipes or conductors.

The black-boards, 4 feet wide, painted upon the hard finished walls, are indicated by the lines *b*, *b*, *b*, *b*, *b*, in the recitation rooms, and along the walls behind the Master's table, extending on each side to the windows beyond, *e*, *e*, making in the School about 300 feet of black-board. The long benches *e*, *e*, are used for seating *temporarily* new pupilt on their entering School, until the Master can assign them regular seats; also for seating Visitors at the Quarterly Examinations. The space P,P, a broad step, 18 feet by 2 feet wide, is used for some class exercise on the black-boards. The passage *t*, *t*, about 18 inches wide, running the whole length of the room, affords great facility in the movements of pupils to and from the recitations and other class exercises. The Master's class generally recite in the space *o*, *o*, at the back of the room, which is 4 feet wide by 64 feet long.

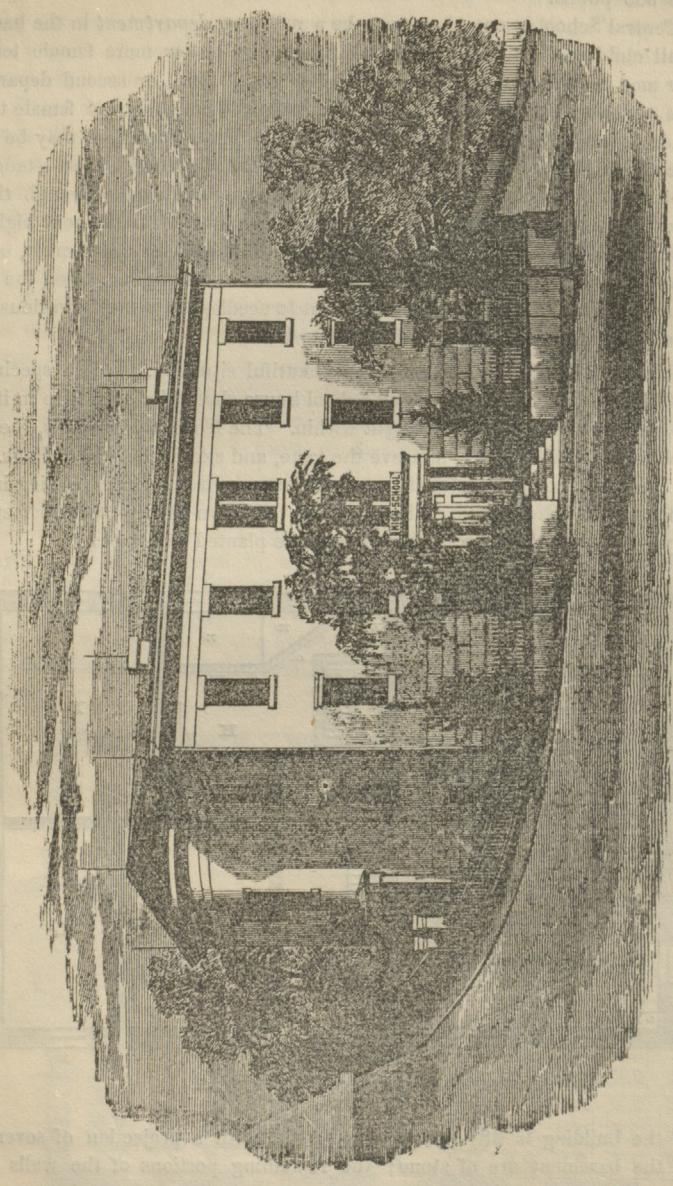
The windows W, W, which are hung with weights, and furnished with inside blinds, contain 12 lights each of 10 by 16 in. glass. The quantity of air furnished for each scholar is a matter of no small importance. Each room in a Grammar School, intended to accommodate 200 pupils, should contain over 35,000 cubic feet, deducting the space occupied by the furniture. This estimate allows every child about 150 cubic feet of air for every hour and a half, on the supposirtion that no change takes place, except at the time of recess. But the rate at which warm air is constantly coming into the rooms from



PLAN III.—TRANSVERSE SECTION OF A GRAMMAR OR UNION SCHOOL, ETC.—FIG. 5.

the furnace, increases the allowance for every child to about 300 cubic feet for every hour and a half.

Fig. 5 exhibits a *section* of the building as if it were cut through the centre. It shows in an *end view* the projection, belfry, rooms, seats, desks and cellar. An imperfect outline of the warming apparatus is presented, giving an outline of the plan of its con-



PLAN IV.—PERSPECTIVE VIEW OF A SUPERIOR HIGH OR CENTRAL SCHOOL—FIG. 1.

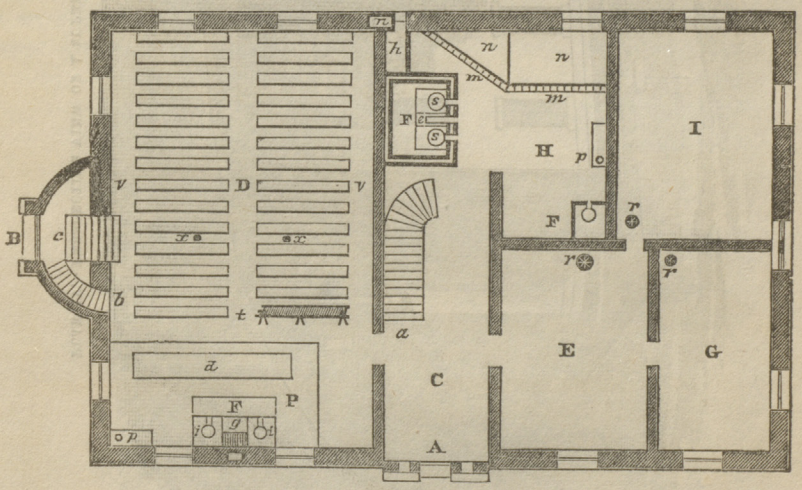
struction. The smoke pipe, connected with *a*, the heater, coiled twice around in the air chamber, passes off in the direction of *b*, *b*, to the chimney. The short tin pipes *c*, *c*, conduct the warm air into the lower rooms; and the long ones *e*, *e*, convey it to the rooms in the second story. On each side of the projection, over the door *d*, is a window,

lighting the outside entry, and also the middle entry by another window over the inside door. The end view of the seats and desks do not represent the different sizes very accurately, but sufficiently so to give a correct idea of the general plan.

We give, on the preceding page, the front view of a High School house, which may serve as an exemplar of a Central Town School house. The building is intended to accommodate 600 pupils.

In such a Central School house, there may be a *primary department* in the basement story for small children, both male and female, taught by one or more female teachers. The first floor may be appropriated to an *intermediate School*, or second department, with separate apartments for boys and girls, and taught by a male and female teacher respectively, or by male teachers, as may be preferred. The second floor may be appropriated to the *High School*, or highest department of the Common School—taught by the Head Master of the whole establishment. As the pupils advance through the prescribed courses in the lower departments, they should be advanced to the next higher department, until they complete the course of instruction in the senior department, or High School. The same system of teaching should be observed throughout; and the pupils will not be impeded, and the parents will not be put to needless expense, by various modes of teaching and the use of unsuitable and improper books.

This School house occupies an elevated and beautiful situation. It is a specimen of plain but tasteful architecture; and every School house should be attractive in its very appearance—emblematical of what is taught within. The fence, the grounds, the trees, should be such as to please the eye, improve the taste, and excite cheerful feelings. The yards around this building are enclosed by a handsome baluster fence, resting in front on heavy blocks of rough granite. The steps are of hewn granite, twelve feet long, making a very convenient entrance. The grounds are planted with trees.



PLAN IV.—THE BASEMENT FLOOR.—FIG. 2.

The size of the building is fifty feet by seventy-six, with a projection of seven feet. The walls of the basement are of stone; the remaining portions of the walls are of brick.

The School being designed for both boys and girls, an entirely separate entrance is provided for each department. The front door at which the girls enter has a very beautiful frontispiece, with double columns (thus providing for large side lights) and a heavy

ornamented cap—all cut from granite in the best style. The words "HIGH SCHOOL" may be seen over this door.

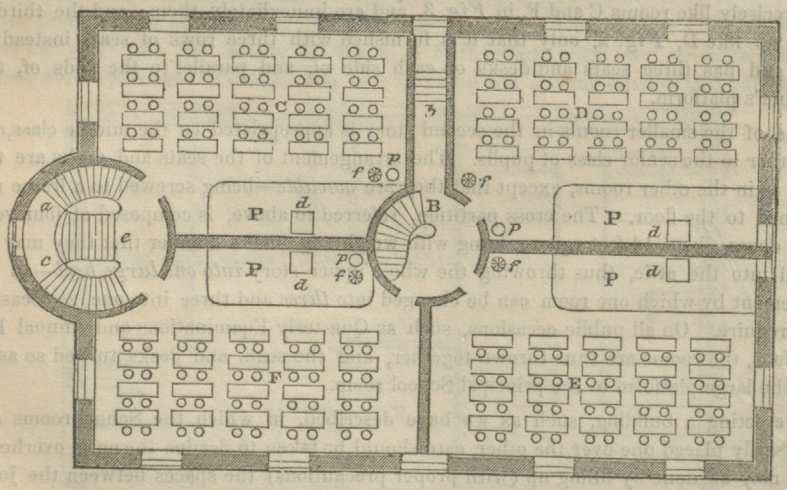
The door in the circular projection, fronting on another street, is the entrance for boys, and has also a fine frontispiece, cut from granite.

The Basement, First and Second Floors, are fitted up as School-rooms, and the entire building, thus divided, is capable of accommodating 600 pupils—boys and girls. We will now proceed to give an explanation of the accompanying *Plans* of the different School-rooms in the building. A reference to *Fig.* 1 will be advantageous in connexion with such explanation.

The Rooms in the *Basement Floor* (which is 12 feet high in the clear,) are separated from each other by solid brick walls. The pupils, in the girls' department, entering the house at A, (*Fig.* 2,) pass into the large lobby C, 12 feet by 28, from which they can go to all parts of the building appropriated to their use.

The furnace room H has a brick floor, and can be kept in as good order as any other parts of the house. The wood boxes, *n*, *n*, and the furnace F, are so constructed that, with an ordinary degree of care, the room may be kept as clean as any of the School-rooms. In this room, at *m*, *m*, provision is made for setting up umbrellas. It resembles a ladder placed in a horizontal position, and is fastened to the ceiling on one side, and supported on the other by substantial posts of oak or other strong wood turned in a tasteful style, and let into the floor. The pump, *p*, accessible to all in the girls' department, connected with a nice sink, lined with lead, affords an abundant supply of excellent water. The rooms E, G and I, nearly 16 feet by 24 each, are appropriated as offices of the School Trustees, Superintendent and Masters, &c.

The large Lecture Room D, on the left hand side of the *Plan*, is furnished with a sufficient number of seats (a specimen of which is shown at *l*,) to accommodate about 250 pupils. On the platform P., which is raised seven inches from the floor, is a long table, *d*, made convenient for experimental Lectures in Chemistry, Natural Philosophy, &c., having pneumatic troughs for holding gases. At F, (*i*, *g*, *i*,) are suitable provisions for furnaces, &c., required in the preparation of chemical experiments. The pump, *p*, with a sink like the other, (in room H,) is used exclusively by the pupils in the boys' department.



PLAN IV.—THE FIRST FLOOR.—FIG. 3.

At all Lectures and other exercises in this room, the girls, entering at *a*, occupy the seats on the right of the middle aisle. The boys, entering by descending the short flight

of stairs *b*, are seated at the opposite side of the room. This arrangement is deemed advisable in order to obviate the objections sometimes made against having a School for boys and girls in the same building. The departments are thereby kept entirely separate, except in exercises in vocal music and occasional lectures. The boys enter the house at the end door B, which is six feet above the basement floor, and by a short flight of stairs they reach the first story at *e* (*Fig.* 3.)

The three rooms, D, E and F, (*Fig.* 3,) are appropriated to the department for girls. They are easy of access to the pupils, who, ascending the broad flight of stairs (at *a*, *Fig.* 2), terminating at B, can pass readily to their respective rooms.

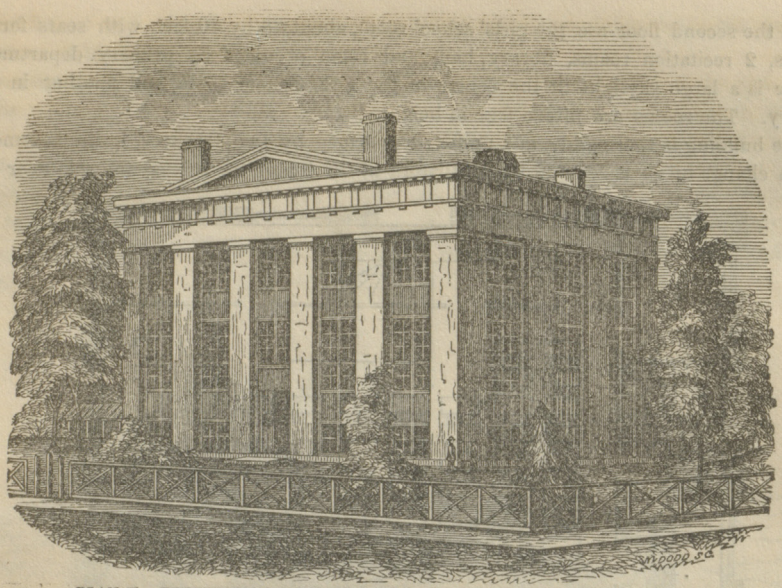
As the course of instruction in this School occupies three years, the room D, (*Fig.* 3,) is appropriated to the studies of the *first* year, E to those of the *second,* and F to those of the *thrid.* In each room there are three sizes of seats and desks, but the arrangement in all is uniform—the largest being at the back of the room. The largest desks are 4 feet 8 inches long, and 22 inches wide on the top; the middle size is two inches smaller, and the other is reduced in the same proportions. The largest seats are as high as common chairs (about 17 inches,) and the remaining sizes are reduced to correspond with the desks. The passages around the sides of the rooms vary from 2 to 4 feet wide, and those between the rows of desks from 18 to 24 inches.

On the raised platforms, P, P, P, P, are the Teachers' Tables, *d*, *d*, *d*, *d*, covered with green baize and furnished with four drawers each. The registers, *f*, *f*, *f*, *f*, admit the warm air from the furnace, and the pipes, *p*, *p*, *p*, conduct it into the rooms in the upper story. The passage, *b*, leads into the yard, which is ornamented with a variety of shrubbery. The door near *e*, leading from the room F is used only for Teachers and Visitors, except when the two departments assemble in the hall. In the room C the boys pursue the studies prescribed for the first year. The other rooms in this department are in the next story.

Pupils ascending from the area *e*, *Fig* 3, by two circular staircases, land on the broad space *a*, *c*, from which, by a short flight of stairs, they reach the seeond story, which is sixteen feet high in the clear. This second story is divided into three school-rooms —two of the smaller of which, separated from the third by a nross partition, are fitted up precisely like rooms C and F, in *Fig.* 3. and are immediately them; and the third is fitted up like D, *Fig.* 2, only that it is furnished with three rows of seats instead of two, and has three seats and desks on each side of, and parallel to the ends of, the Teacher's platform.

One of the smaller rooms in the second story is appropriated to the middle class,and the other to the senior class of pupils. The arrangement of the seats and desks are the same as in the other rooms, except that they are *movable*—being screwed to a frame not fastened to the floor. The cross partition, referred to above, is composed of four very large doors, about 14 feet square, hung with weights in such a manner that they may be raised into the attic, thus throwing the whole upper story *into one large hall*—an arrangement by which one room can be changed into *three* and three into *one*, as occasion may require. On all public occasions, such as Quarterly Eqaminations and Annual Exhibitions, the rooms are thus thrown together, and the seats and desks turned so as to face the large platform in the principal School room.

In erecting a building, such as we have described, in which the School rooms are necessarily placed one over the other, care should be taken to deaden the noise overhead. This may be done by filling up (with proper precautions) the spaces between the joice of the floors with tan bark, cork shavings, or some other compact light substance.

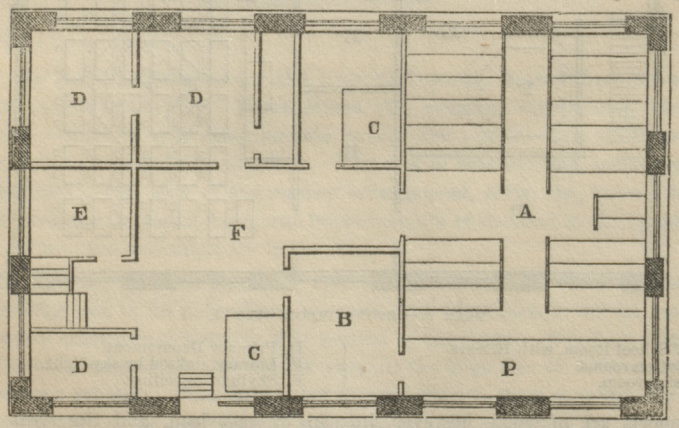


PLAN V.—PERSPECTIVE VIEW OF A GRAMMAR OR CENTRAL SCHOOL.—FIG. 1.

The building, which has already been erected on a corner lot 198 by 170 feet, is of brick, 70 by 44 feet on the ground. The basement wall, up to the water table, is of stone, laid in hydraulic cement. The roof is covered with tin, laid in white lead.

The basement wall, 10 feet high in the clear, contains a lecture room, (which serves also as a chapel,) 26½ by 40 feet, with comfortable seats to accommodate conveniently 200 pupils. The floor descends 2 feet from the rear of the room to the platform, giving 12 feet height immediately in front of it. A laboratory, 12 by 15½ feet, adjoins the lecture room, with which it communicates by a door at the end of a platform. The remainder of the basement floor is occupied by the furnaces for warming the building and by the rooms of the Janitor.

The first floor is occupied by the male department, and consists of a School room about 30 by 54 feet, and nearly 15 feet high in the clear, with two recitation rooms, entries, &c. There are 62 desks, each four feet long and accommodating two pupils.

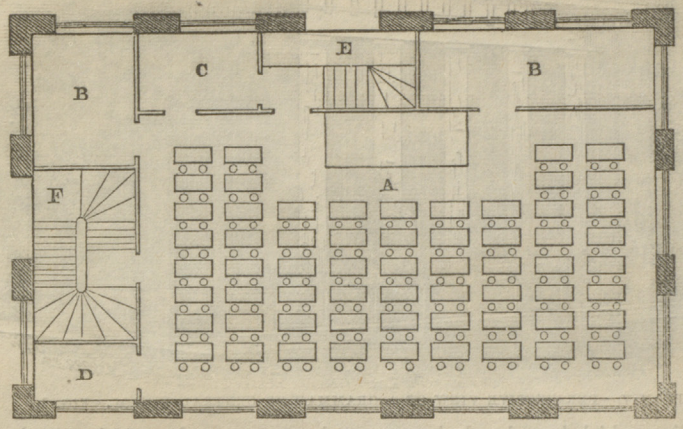


PLAN V.—BASEMENT.—FIG. 2.

A. Lecture Room and Chapel.
B. Labboratory.
C, C. Furnaces.
D, D, D. Janitor's rooms.
E. Entry.
F. Hall.

On the second floor are the girls' school room, about 28 by 40 feet, with seats for 76 pupils, 2 recitation rooms, library, hall, and room occupied by primary department. There is a large skylight in the centre of the girls' School room, and another in the library. The rooms are fifteen feet in height.

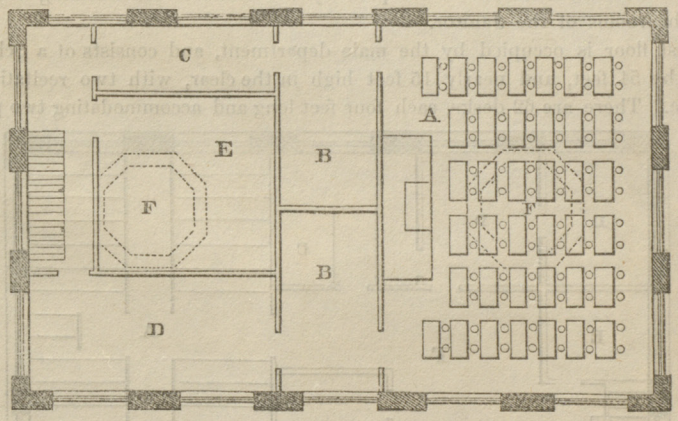
The building is thoroughly and uniformly warmed by two furnaces, in the basement, and a change of air is secured by ventilators at the top of the rooms, and also near the



PLAN V.—FIRST FLOOR.—FIG. 3.

A. Boys' School Room, with 124 seats.
B, B. Recitation rooms.
C. Dressing room.
D. Closet for Apparatus.
E. Entrance for Boys.
F. Entrance for Girls.

floor, opening into flues which are carried up in the chimneys. The warmth imparted by the smoke which passes up in the adjoining flues secures a good draft. In the upper story additional means of ventilation are furnished by the sky-lights, which can be partially opened. *Illustrations on this subject will be given at the close.*



PLAN V.—SECOND FLOOR.—FIG. 4.

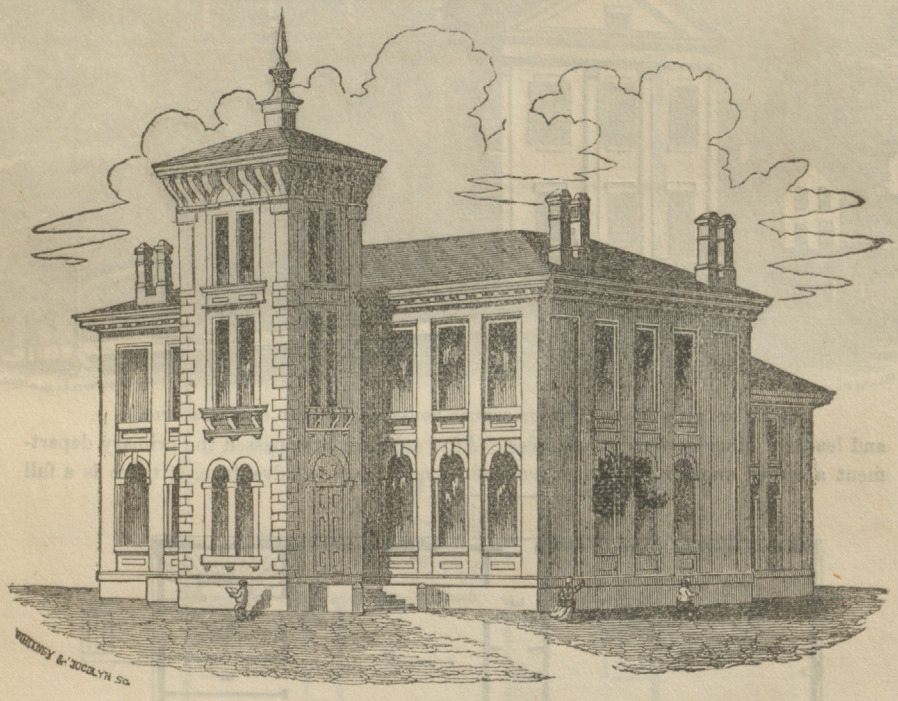
A. Girls' School Room, with 76 seats.
B, B. Recitation rooms.
C. Dressing room.
D. Primary Department.
E. Library, lighted by sky-light.
F. Skylight in ceiling.

The supports are of wood, however, instead of cast iron, and the seats are easy Windsor chairs. Both seats and desks are firmly seecured to the floor by small iron knees and screws. *For patterns, see illustrations at the end.*

The School and recitation rooms are all furnished with large slates set in the wall in the room of blackboards.

Description of the teachers' desks in the School rooms will be given at the end.

The whole cost of the building, including furnaces, scholars' desks and chairs, slates and inkstands, was about $6,000. As many of the School houses now about being erected in several of the Towns of the Province at about the cost of the building illustrated in the Number, the plans and interior arrangements carried out in this building will be an excellent guide in approximating to the cost of one adapted to the wants and resources of the Town in which it is designed to erect one or more superior School-houses.



PLAN NO. VI.—PERSPECTIVE VIEW OF ONE OF THE TORONTO CITY WARD SCHOOLS.

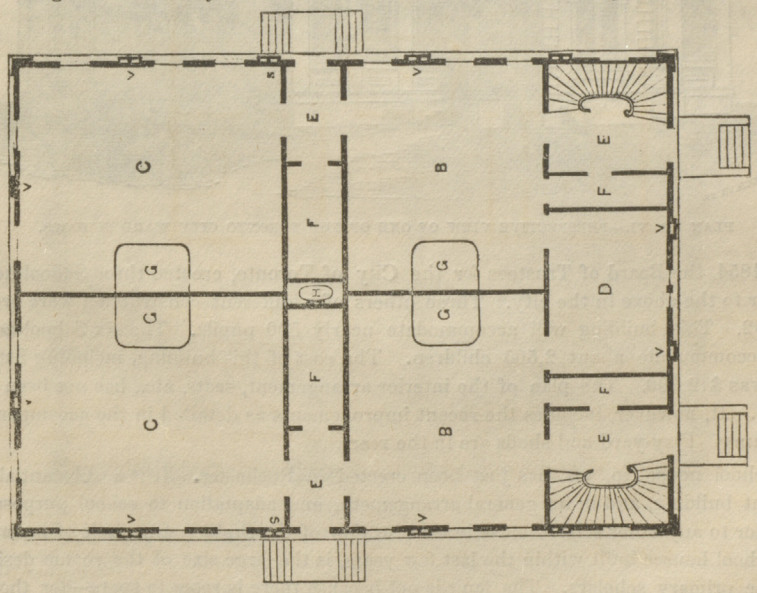
In 1854, the Board of Trustees for the City of Toronto, erected three School-houses similar to the above in the city. Three others of a different construction were erected in 1852. This building will accommodate nearly 500 pupils. The six School-houses will accommodate about 2,500 children. The cost of this building, including fittings, etc., was $12,000. The plan of the interior arrangement, seats, etc., has not been published. It, however, includes the recent improvements as detailed in the accompanyinu diagrams· Play-yard and sheds are in the rear.

School house No. VII. has just been erected in Rochester. It is a substantial and elegant building, and in its general arrangement, and adaptation to school purposes, is superior to any other school house in that section of the State One fault of several of the school houses built within the last few years, is the large size of the rooms designed for the primary scholars. The fault is not because there is room to spare—for those of the largest size are full to overflowing, and so many are assembled in one department without recitation rooms, that it is found necessary to employ two teachers in the same room. This necessarily creates confusion, often prevents the preservation of good order,



PLAN NO. VII.—PERSPECTIVE OF SCHOOL-HOUSE, FENCE, AND GROUNDS.—FIG. I.

and leads to other serious annoyances. After scholars have passed the primary department a larger number may be assembled in one room to advantage, if there is a full



PLAN VII.—FIRST FLOOR.—FIG. II.

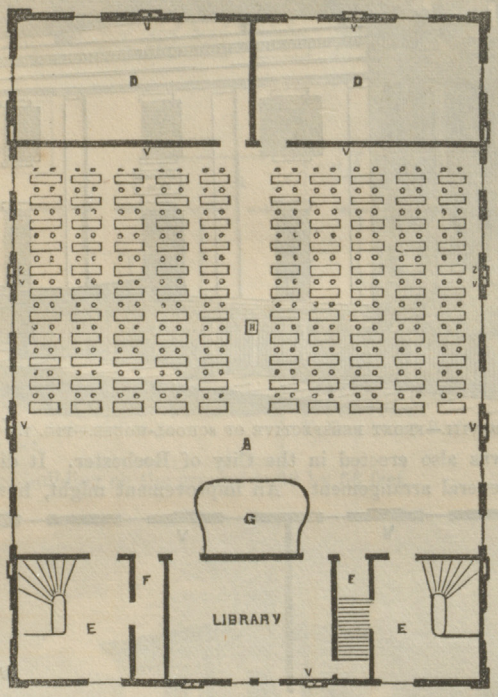
B. Intermediate Rooms, 28½ by 25 feet.
C. Primary Rooms, 28½ by 33 feet.
D. Recitation Room, 19½ by 15 feet.
E. Halls, 15 by 14 feet.
F. Wardrobes, 15 by 4 feet.
G. Teachers' Desks.
H. Furnace Register.
V. Ventilating Registers.

complement of recitation rooms adjoining. A plan of the school rooms is given in this and the preceding page.

The size of the building on the ground is 84 feet 8 in. by 60 feet 8 in.

The building is heated by two of Chilson's Furnaces in the basement.

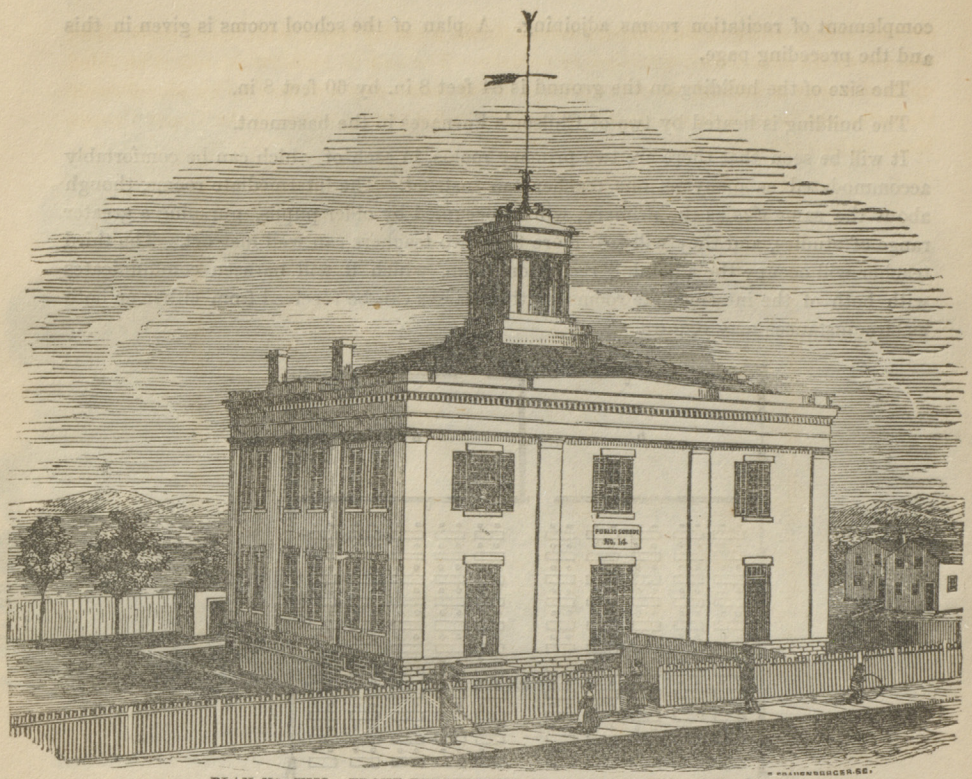
It will be seen that there are two primary rooms, in each of which can be comfortably accommodated as many as one teacher can instruct. The intermediate rooms, though about the same size as the primary, will be occupied by older pupils, pursuing a greater range of studies, and they will seat more than two teachers can well instruct. The third teacher will occupy the adjoining recitation room, which it will be seen communicates with both of the intermediate rooms, so that classes can be received from either or both as circumstances may require.



PLAN VII. SECOND FLOOR—FIG. III..

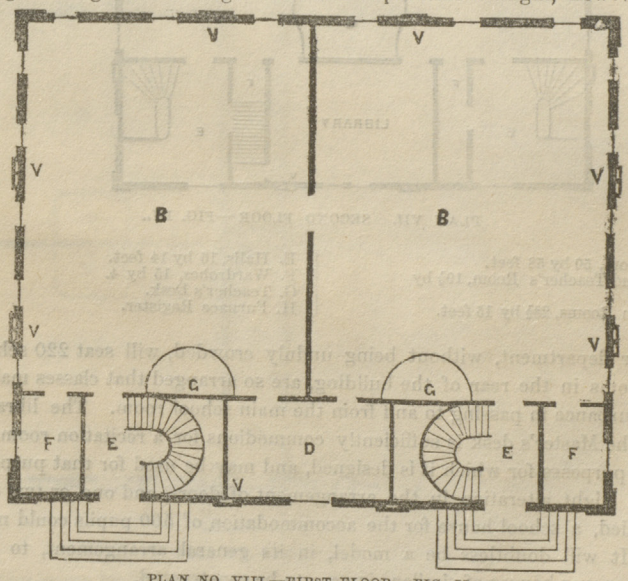
A. Senior Room, 50 by 58 feet.
L. Library and Teacher's Room, 19½ by 15 feet.
D. Recitation Rooms, 28½ by 15 feet.
E. Halls, 15 by 14 feet.
F. Wardrobes, 15 by 4.
G. Teacher's Desk.
H. Furnace Register.

The senior department, without being unduly crowded, will seat 220 scholars. The recitation rooms in the rear of the building, are so arranged that classes make the least possible disturbance in passing to and from the main school room. The library room in the rear of the Master's desk is sufficiently commodious for a recitation room, in addition to the other purposes for which it is designed, and may be used for that purpose if necessary. With slight alteration in the arrangement of doors, and one or two other points easily remedied, a school house for the accommodation of 500 pupils could not be better arranged. It will doubtless be a model, in its general arrangement, to be followed hereafter whenever houses of similar size are to be constructed.



PLAN NO. VIII.—FRONT PERSPECTIVE OF SCHOOL-HOUSE.—FIG. I.

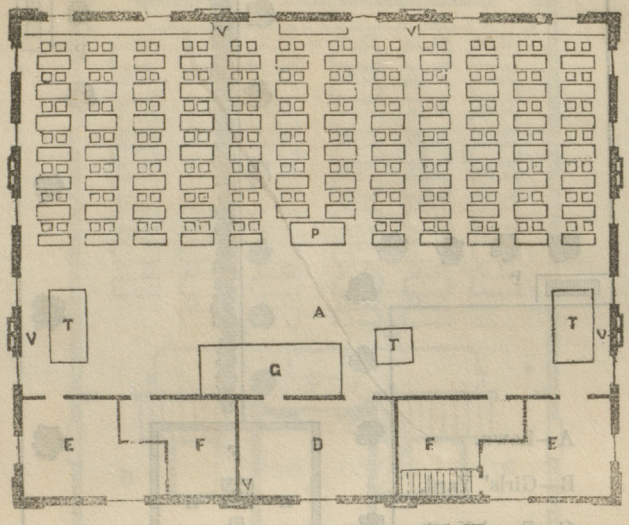
This school house was also erected in the City of Rochester. It differs little from the preceding in its general arrangement. An improvement might, however be made



PLAN NO. VIII.—FIRST FLOOR.—FIG. II.

B. Primary and Intermediate Rooms, 33 by 41 feet.
D. Recitation Rooms, 16 by 10 feet.
E. Halls, 15 by 10 feet.
F. Wardrobes, 8 by 10 feet.
G. Teacher's Desks.
V. Ventilating Registers.

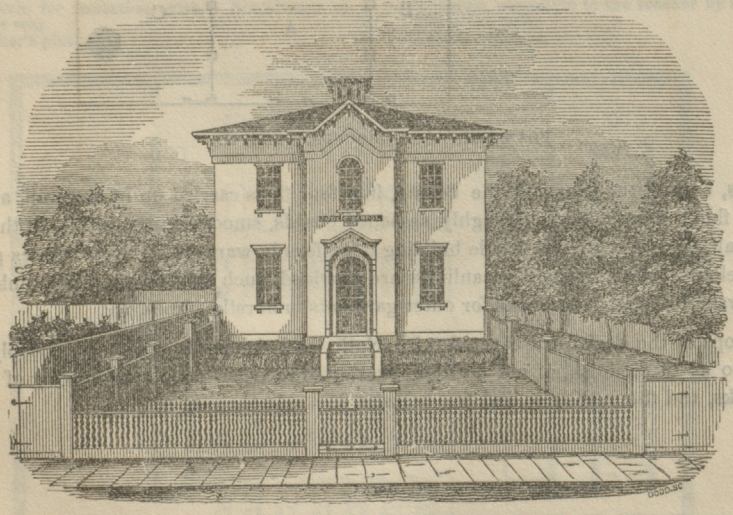
by converting either of the primary rooms B into a gallery room, with bench seats rising one above the other, with a foot-guard on each. The end of both rooms might be fitted up in this way if desired, so as to embrace in the same room a gallery and a school room Galleries form a valuable and important feature in the arrangements of the Upper Canada Model Schools at Toronto.



PLAN VIII.—SECOND FLOOR.—FIG. III.

A. Senior Room, 66 by 42 feet.
D. Library and Teachers' Room, 17 by 10 feet.
E. Recitation Rooms, 14 by 10 feet.
F. Halls, 10 by 9 feet.
T. Drawing Tables.
G. Teachers' Desk.
P. Piano Forte.
V. Ventilating Registers.

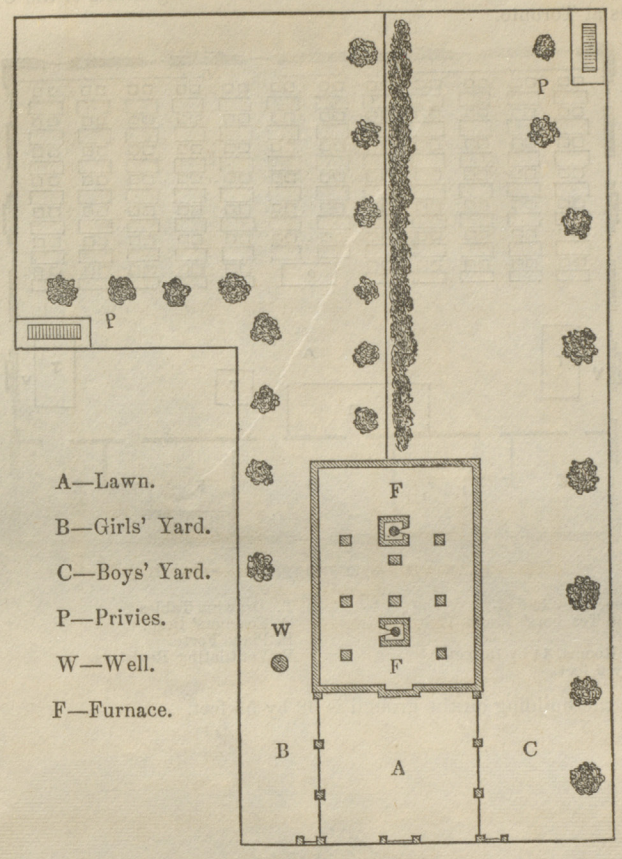
The size of the building on the ground is 68 by 56 feet.



PLAN NO. VIII.—PERSPECTIVE VIEW, WITH GROUNDS, &C.—FIG. I.

The lot on which this school-house is erected is 225 deep and 100 feet wide for a depth of 125 feet, and 161 feet wide for the remaining 64 feet. It is divided into three

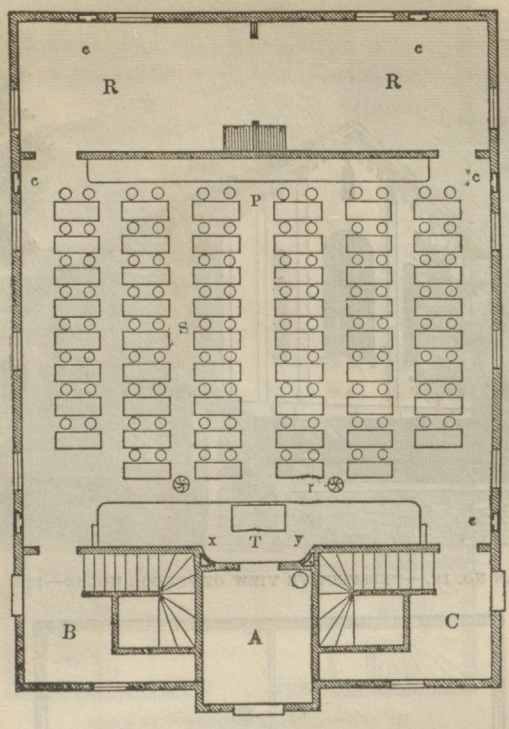
yards, as exhibited in the ground plan, (Fig. 2,) each substantially inclosed, and planted with trees and shrubbery. The dimensions of the building are 62 feet by 44 on the ground. It is built of brick. Each room is ventilated by openings, controlled by



PLAN VIII.—OUT GROUNDS.—FIG. II.

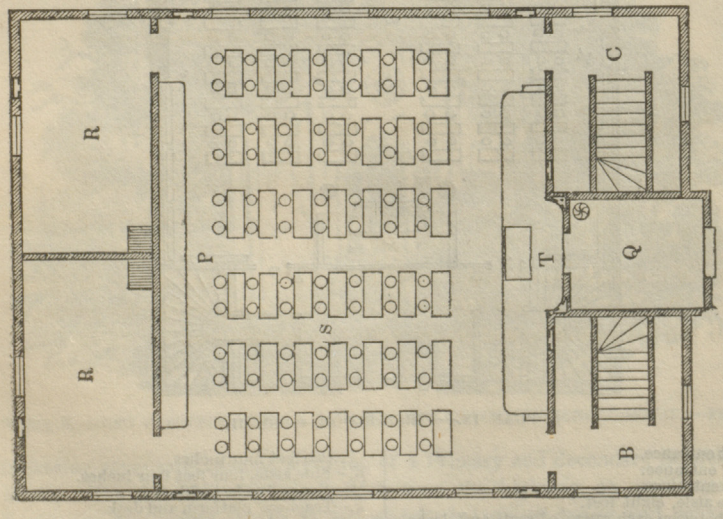
registers, both at the floor and the ceiling, into four flues carried up in the wall, and by a large flue constructed of thoroughly seasoned boards, smooth on the inside, in the partition wall, (Fig. 3, x.) The whole building is uniformly warmed by two furnaces placed in the cellar. Every means of cleanliness are provided, such as scrapers, mats, sink with pump, wash-basin, towels, hooks for outer garments, umbrella stands, &c.

The tops of the desks are covered with cloth, and the aisles are to be cheaply carpeted, so as to diminish, if not entirely prevent, the noise which the moving of slates and books, and the passing to and fro, occasion in a school-room.

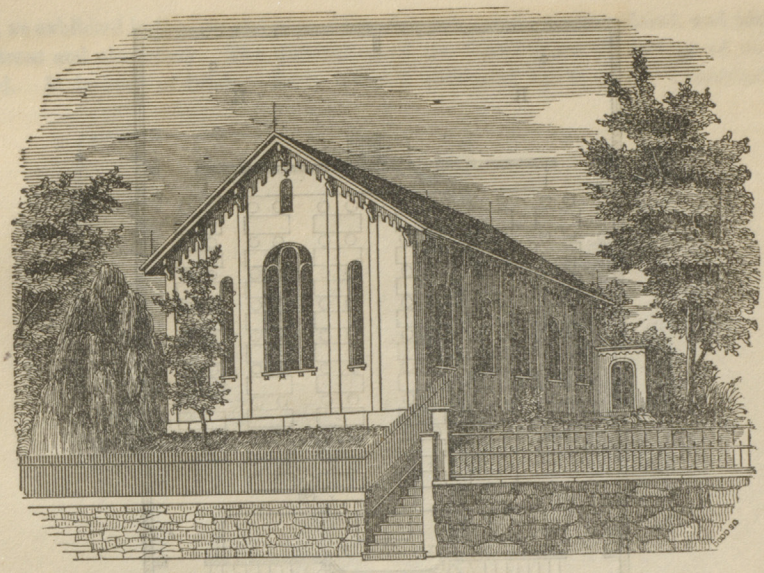


PLAN VIII.—FIRST FLOOR.—FIG. III.

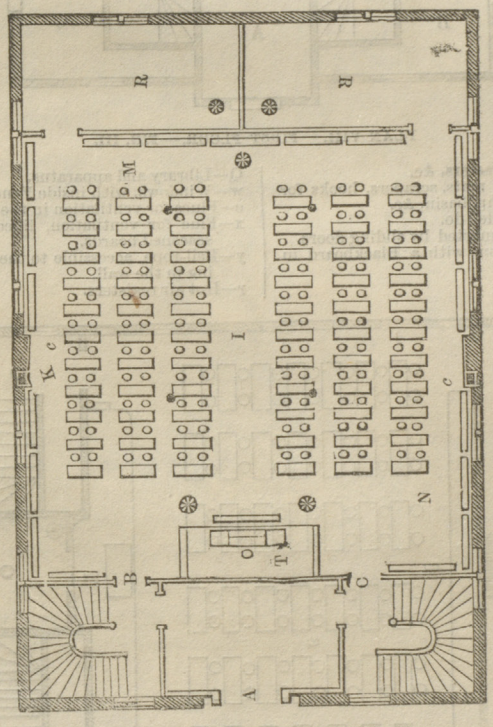
A—Front entrance for Masters, &c.
B—Girls' entrance, with mats, scrapers, hooks for clothes, a sink, pump, basin, &c.
C—Boys' entrance, with do. do.
R—Recitation rooms, connected by sliding doors.
P—Platform for recitation, with a Blackboard in the rear.
T—Teacher's platform.
Q—Library and apparatus.
w—Windows, with inside Venetian blinds.
c—Flues for ventilation in the outer wall.
x—Flue for ventilation, lined with smooth, well seasoned boards.
y—Bell-rope, accessible to the teacher by an opening in the wall.
r—Hot air registers.



PLAN VIII.—SECOND FLOOR.—FIG. IV.

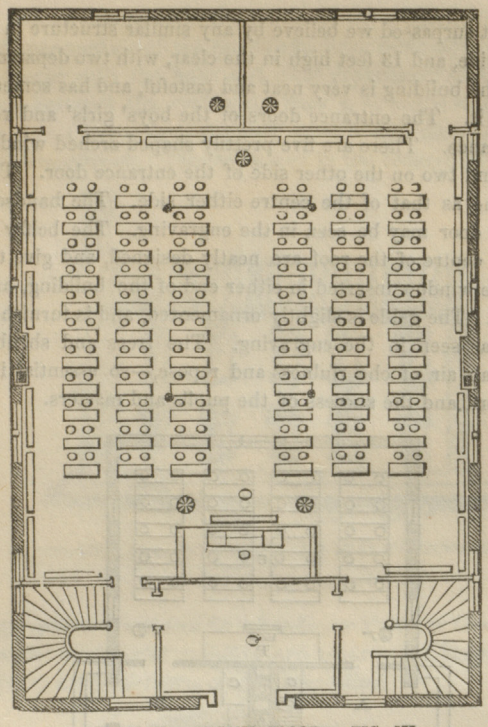


PLAN NO. IX.—PERSPECTIVE VIEW OF SCHOOL HOUSE—FIG. I.



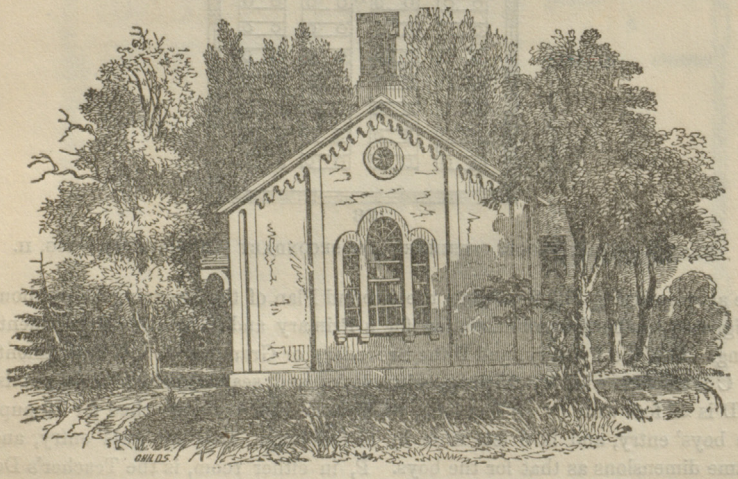
PLAN IX.—FIRST FLOOR.—FIG. II.

A.—Front entrance.
B.—Girls' entrance.
C.—Boys' entrance.
I.—Centre aisle, eight feet.
L.—Aisle between each range of seats and desks, two feet four inches.
K.—Side aisle, four feet four inches.
M.—Space five feet wide.
T.—Teachers' platform and desk



PLAN IX.—SECOND FLOOR.—FIG. III.

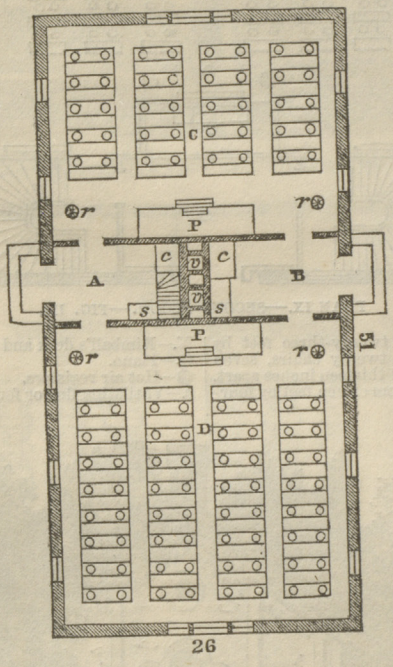
R.—Recitation rooms, each twenty-three feet by twelve, furnished with twenty chairs, seven inches from the wall and thirteen inches apart.
Q.—Library and apparatus, from eleven feet by fourteen feet.
N.—Kimball's desk and two chairs.
O.—Piano.
◎—Hot air registers.
c.—Vntilating flue or foul air duct. N. Settees.



PLAN NO. X.—END PERSPECTIVE OF A PRIMARY AND SECONDARY SCHOOL-HOUSE.—FIG. I.

This engraving represents the end elevation of a Primary and Secondary School-House for 130 pupils. The School-house stands back from the highway, on an elevated site, —as School-house sites ought always to be—and for beauty of design and convenience

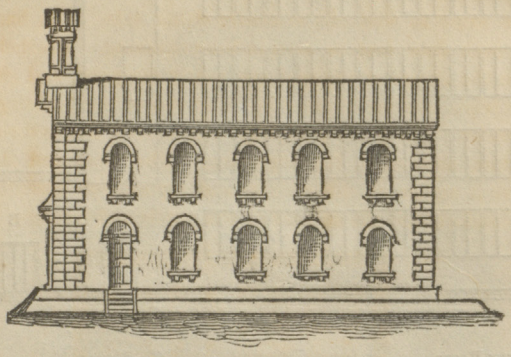
of arrangement is not surpassed we believe by any similar structure in Canada. It is 51 feet long by 26 feet wide, and 13 feet high in the clear, with two departments on the same floor. The style of the building is very neat and tasteful, and has something approaching to the Tuscan cast in it. The entrance doors of the boys' girls' and respectively are no and scholastic appearance. There are five prettily shaped arched windows in either side —three on one side and two on the other side of the entrance door. Their size and appearance are the same as that of the centre either side. The handsome characteristic projection over each door may be seen in the engraving. The belfry and double chimney issuing from the centre of the roof are neatly designed, and give the building a finished one in the triple window inserted in either end of the building, and as seen in the one facing the reader. The gable is slightly ornamented, and is furnished with a circular ventilating window, as seen in the engraving. The trees and shrubbery around the School-house give it an air of cheerfulness and repose,—so essential in contributing to the health, the comfort, and the success of the pupils and masters.



PLAN X.—FIRST FLOOR. PRIMARY AND SECONDARY SCHOOL-HOUSE.—FIG. II.

The accompanying Fig 2 exhibits the Ground Plan of the foregoing School-house, and is designated to afford accommodation for a Primary and Secondary department in the building. C is the Primary, and D the Secondary or Grammar School department. The room C is 25 feet wide by 25 long, with desks and seats attached for 60 pupils. The room D is 25 feet wide by 30 feet long, with desks and seats attached for 70 pupils. A is the boys' entry, and is 6 feet wide by 10 feet long. B is the girls' entry, and is of the same dimensions as that for the boys. P, in either room, is the Teacher's Desk and Platform. The seats for the younger pupils are placed immediately in front of the Teacher's desks, and are slightly lower, in their elevation above the floor, than those in the rear of the School-room—as seen in the Section on seats and desks at the close of this article. *r*, *r*, *r*, *r*, are Registers for the hot air, for heating the School-rooms, which issues from the furnace in the basement of the building, as described on page 85. *v*, *v*, are flues for

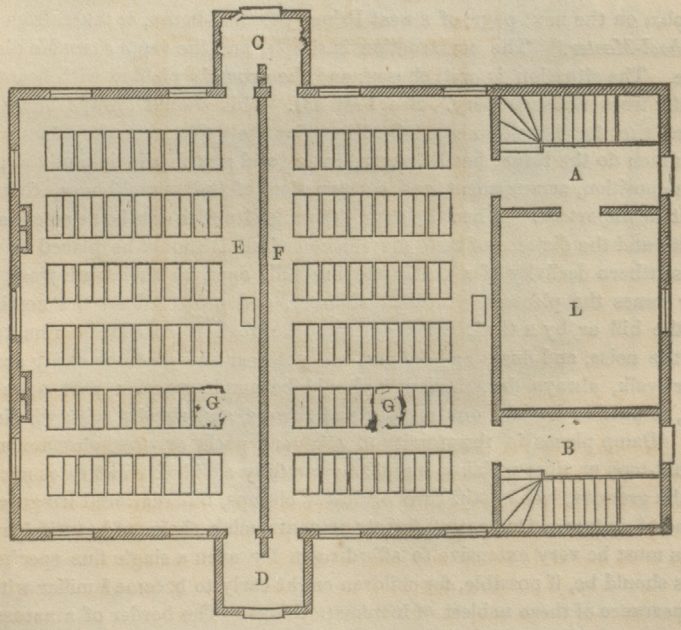
ventilation, and will be described in the article on the subject at the close. *c*, *c*, are the closets for the dinner baskets of the pupils who have come from a distance. *s*, *s*, are the water sinks connected with the boys and girls' department of the School. The smoke pipe is carried up between the ventilating flues *v*, *v*, and is made to branch off into two separate chimnies as it issues from the roof, so as to accommodate the bell—a very neat and convenient arrangement. The stairs seen in the Ground Plan lead up into the attic.



PLAN NO. XI.—SIDE ELEVATION OF A BRICK GRAMMAR SCHOOL-HOUSE.—FIG. I.

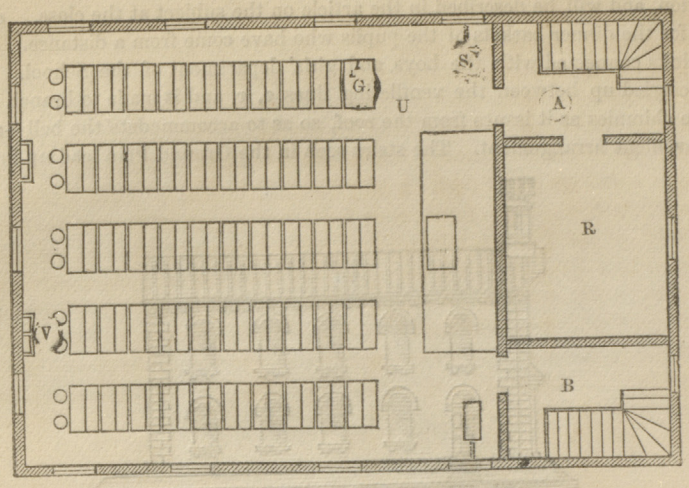
(*On a reduced scale.*)

The foregoing represents a design for a handsome Union or Grammar School-house. It is a very chaste and ornamental building, and in excellent keeping with the correct proportions requisite in a School-house of this description.



PLAN XI.—FIRST FLOOR.—FIG. II.

A—Staircase for Girls to Secondary School, U.
B— " " Boys " "
C—Entrance for Girls to Primary, E, and Intermediate School, F.
D— " " Boys " "
E—Primary School-room.
F—Intermediate "
G—Seat and desk atttached, for two pupils, with iron ends.
L—Gallery Room.



PLAN XI.—SECOND FLOOR.—FIG. III.

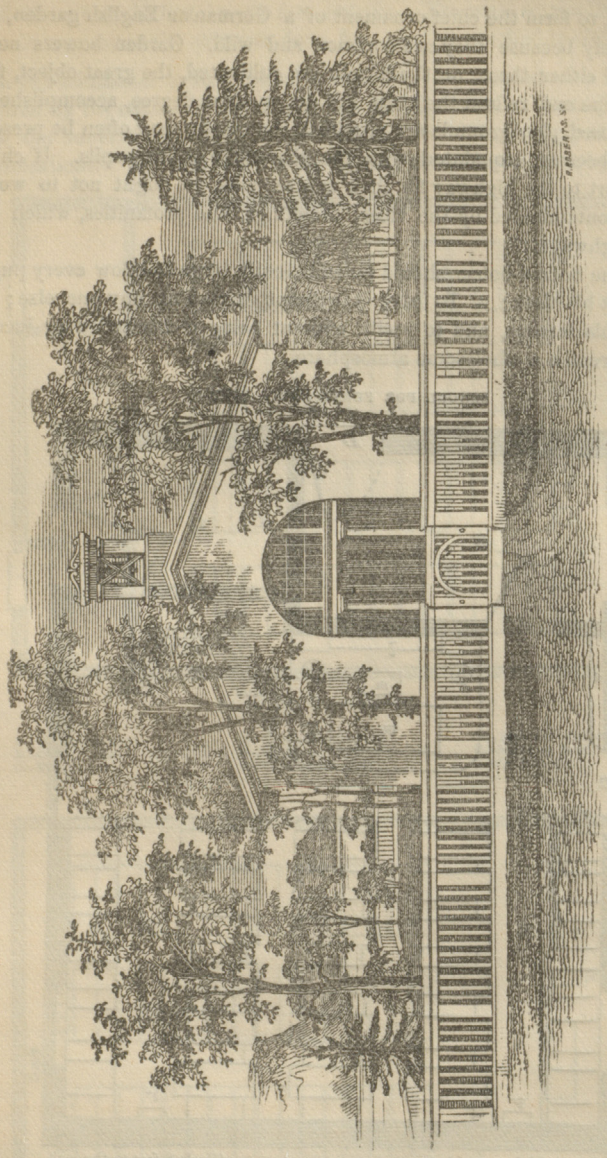
U—Secondary Room.
R—Gallery Room.
S—Stove.
V—Flue for ventilation.

PART II.—PLANS FOR PRIMARY SCHOOLS IN VILLAGES AND RURAL SECTIONS.

The plan on the next page, of a neat Primary School-house, is taken from the "*School and School-Master*." The construction is simple, and the *toute ensemble* pleasing in the extreme. The situation is well chosen, and the grounds planted with beautiful and appropriate trees andshrubbery. See Part III. This should always be attended to in selecting sites for School-houses. On this point the writer remarks:

"So much do the future health, vigor, taste, and moral principle of the pupil depend upon the position, arrangement, and construction of the school-house, that every thing about it is important. When the most desirable situation can be selected, and the laws of health and the dictates of taste may be consulted, it should be placed on firm ground, on the southern declivity of a gently sloping hill, open to the south-west, from which quarter comes the pleasant winds in summer, and protected on the northeast by the top of the hill or by a thick wood. From the road it should be remote enough to escape the noise, and dust, and danger, and yet near enough to be easily accessible by a path or walk, always dry. About it should be ample space, a part open for a play-ground, a part to be laid out in plots and flowers, and shrubs, with winding alleys for walks. Damp places in the vicinity of stagnant pools or unwholesome marshes, and bleak hill-tops or dusty plains, should be carefully avoided. Tall trees should partially shade the grounds, not in stiff rows or heavy clumps, but scattered irregularly as if by the hand of nature. Our native forests present such a choice of beautiful trees, that the grounds must be very extensive to afford room for even a single fine specimen of each; yet this should be, if possible, for children ought early to become familiar with the names and appearance of these noblest of inanimate things. The border of a natural wood may often be chosen for the site of a school; but if it is to be thinned out, or if trees are be planted, and, from limited space, a selection is to be made, the kingly, magnificent oaks, the stately hickories, the spreading beech, for its deep mass of shade, the maples, for their rich and abundant foliage, the majestic elm, the useful ash, the soft and graceful birches, and the towering, columnar sycamore, claim precedence. Next may come the

picturesque locusts, with their hanging, fragrant flowers, the tulip tree, the hemlock, best of evergreens, the celtis, or sweet gum, the nyssa, or tupelo, with horizontal branches and polished leaves, the walnut and butternut, the native poplar and the aspen.



PLAN NO. 1.—FRONT PROJECTION OF A SCHOOL-HOUSE, WITH SHRUBBERY, &C.—FIG. 1.

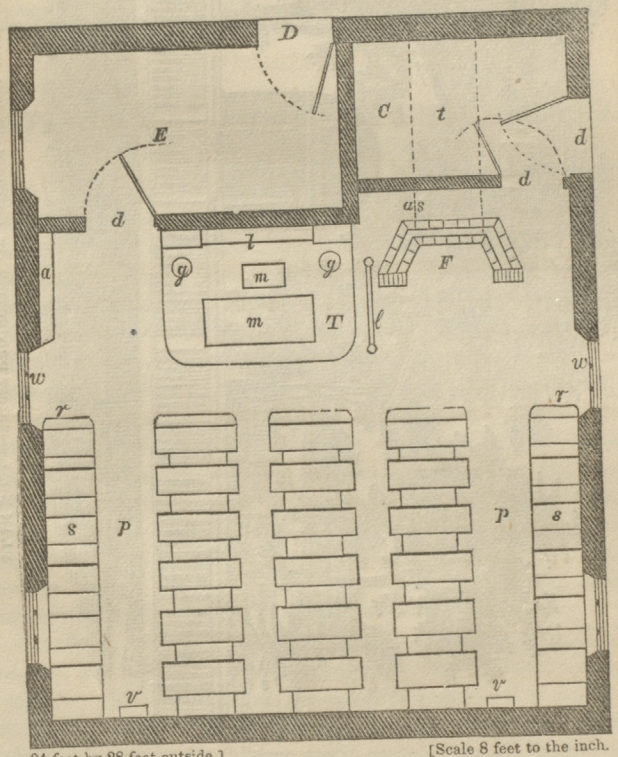
"Of extremely beautiful American shrubs, the number is so great that I have no room for a list. What place intended to form the taste of the young, should be without the kalias, rhododendrons, cornels, roses, liburnums, magnolias, clethras, honeysuckles, and spiræas? And whoever goes into the woods to gather these, will find a multitude of others which he will hardly consent to leave behind. The hill top should be planted with evergreens, forming, at all seasons, a barrier against the winds from the north and east."

"Of the flower plots, little may be said. They may be left to the taste of the teacher and of the cultivated persons in the section. We can only recommend our wild American plants, and again remind the reader, that there is hardly a country town in Canada, from whose woods and meadows a hundred kind of flowers might not be transplanted, of beauty enough to form the chief ornament of a German or English garden, which are now neglected only because they are common and wild. Garden bowers need not be excluded; and if either these or the former are cultivated, the great object, to present something to refine and reform the taste, will be, in some degree, accomplished."

If proper enclosed play-grounds are provided, the master may often be present at the sports, and thus become acquainted with the characters of his pupils. If children are compelled to resort to the highway for their amusements, we ought not to wonder that they should be contaminated by the vices, brawlings, and profanities, which belong to frequenters of highways.

The room of the School-house should be sufficiently large to allow every pupil, 1. To sit comfortably at his desk; 2. To leave it without disturbing any one else; 3. To see explanations on his lessons, and to recite without being incommoded or incommoding others; 4. To breathe a wholesome atmosphere.

SCHOOL FOR FORTY-EIGHT PUPILS.



24 feet by 28 feet outside.] [Scale 8 feet to the inch.

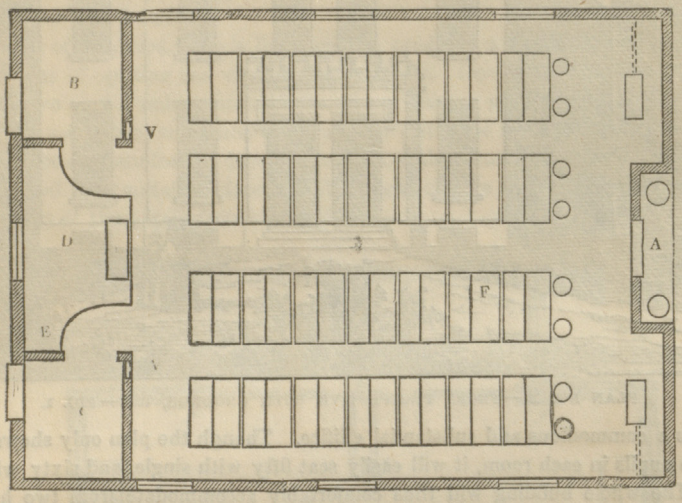
D. Entrance door.
E. Entry.
F. Fireplace.
C. Wood closet, or recitation room.
T. Teacher's platform.
a. Apparatus shelves.
t. Air tube beneath the floor.
d. Doors.
g Globes.
l. Library shelves.
m. Master's table and seat
p. Passages.
r. Recitation seats.
s. Scholars' desks and seats.
v. Ventilator.
w. Windows.
b. Movable blackboard.
a s. Air space behind the fireplace.

PLAN 1.—FIRST FLOOR.—FIG. II.

If the first three objects are fully provided for, the space on the floor will be sufficient. But to secure the advantage of an adequate supply of air, the room must not be less than ten, and, if possible, twelve or fourteen feet high.

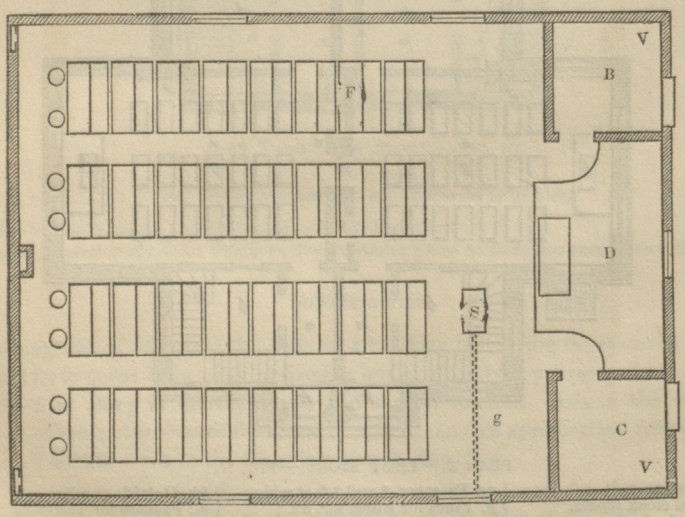
The foregoing Ground Plan of a Primary School is designed to accommodate forty-eight children. It is 24 feet by 28 feet outside. The scale of the Plan is eight feet to the inch. D. represents the entrance door, &c., see list attached to the engraving.

We give two additional ground plans which may be adopted with some slight variations required by the nature of the site, or the peculiar views of the majority of the Trustees, or of the building committee in each case. The following plans present some of these modifications. The first is 34 ft. by 25, and the second, 36 ft. by 27.

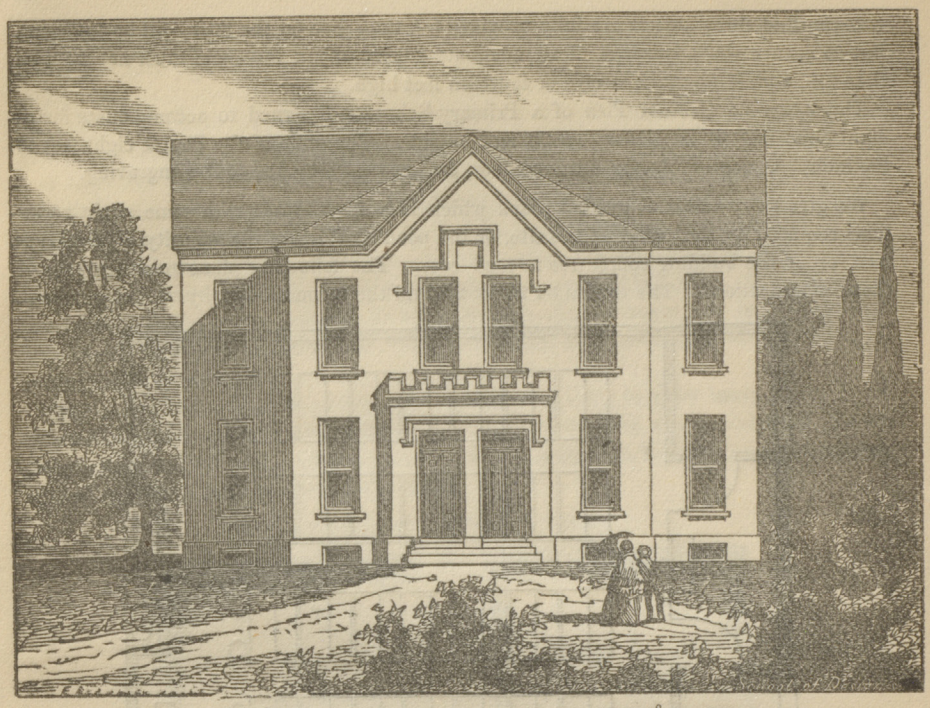


PLAN NO. 1.—FIG. III.

A—Front entrance.
B—Girls' do.
C—Boys' do.
D—Teacher's platform.
E—Library.
S—Ventilating stove.
V—Flue for ventilation.
F—Seat and desk, with iron ends.
g—Cold air duct.

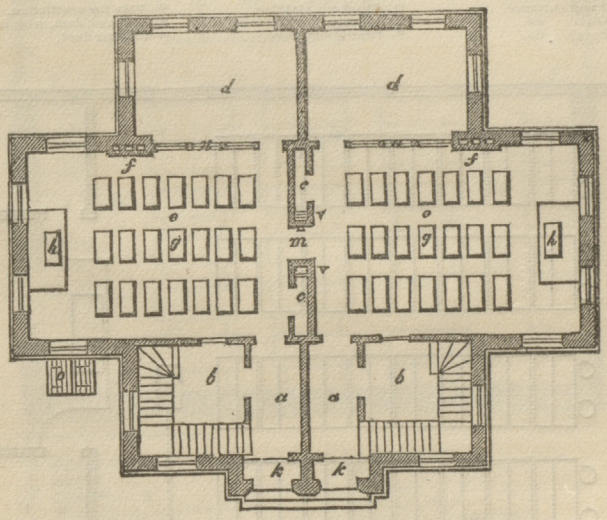


PLAN 1.—FIG. IV.



PLAN NO. 2.—FRONT PROSPECTIVE WITH GROUNDS, &C.— FIG. I.

This is a commodious and substantial edifice. Though the plan only shows seats for forty-two pupils in each room, it will easily seat fifty with single, and sixty with double desks. The whole building will thus comfortably accommodate from two hundred to two hundred and forty. This number will fully employ six Teachers—one master and



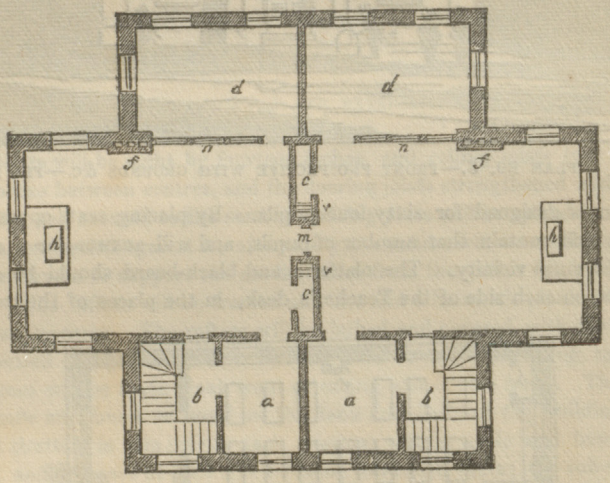
PLAN 2.—FIRST STORY.—FIG. II.

aa. Entrances.
bb. Cap and cloak rooms.
cc. Closets for books, &c.
dd. Class-rooms.
ee. Passages. 2 and 3 feet wide.
ff. Flues for warm air, &c.
gg. Seats for two pupils each.
hh. Teacher's desks.
vv. Ventilating flues.
kk. Outside porches.
m. Passage for Teachers.
nn. Glass partition.
o. Cellar door.

five assistants, for the whole building; or, one master and two assistants, for each floor. The communicating doors between the main rooms, and the glass partitions between the main and class-rooms, admirably favor this arrangement. While two of the Teachers on each floor are conducting recitations in the class rooms, the third can preserve order and promote the studies in the two main rooms, which will be, at the same time, fully in view of the Teachers in the class-rooms.

In schools of this rank the largest provision of black-board should be made. Five feet in height, of the partitions between all the class-rooms, commencing two feet from the floor, and the whole length of the partitions, should be devoted to this purpose. The wall or partition at the back of the book closets, and that opposite the stairs, in each main room, as shown on the ground plans of both stories, should also have the same height of black board surface.

In Schools of this kind there is little use or need for a Teacher's platform and desk, except at time of opening and closing the exercises. One Teacher will necessarily be in charge of two of the main rooms, if there be a Teacher with a class in each recitation room at the same time, and while thus engaged will have no time to sit. A small platform, near the communicating door between the main rooms, will thus probably be found sufficient, and most suitably placed. This slight change will not only save space, but turn the eyes of the pupils from the light.



PLAN 2.—SECOND STORY.—FIG. III.

aa. Clothes rooms. | *bb*. Entrances or lobbies.

The other letters represent the same parts, as in the first story.
For the accommodation of greater numbers, the remaining plans in this class have all two flights of stairs.

SPECIFICATION.

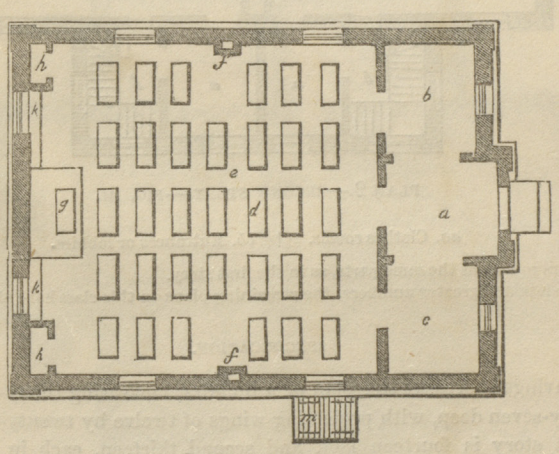
These engravings represent the plan of a building measuring thirty-seven feet on the front, and forty-seven deep, with projecting wings of twelve by twenty-three feet on each side; the first story is fourteen feet, and second thirteen, each in the clear; twelve feet pitch of roof; elevation of first floor two feet. In this specification reference may be made to all similar work in the following plan in this class.

The material in this building may be stone or brick; and for the arrangements of the interior, reference is made to the plans and explanations of the same.



PLAN NO. 3.—FRONT PROSPECTIVE WITH GROUNDS &C.—FIG. I.

This plan is designed for sixty-four pupils. By placing seats opposite the flues, if required, it will contain that number of pupils, and will answer for a small village or thinly settled rural vicinity. The platform and black-board should be extended to the book closets, on each side of the Teacher's desk, in the places of the two seats for four



PLAN 3. FIRST FLOOR.—FIG. II.

a. Lobby and entrance for both sexes.
b. Boys' clothes room to be used for recitation. 8 by 10 feet.
c. Girls' clothes room to be used for recitation, 8 by 10 feet.
d. Seats for two pupils each.
e. Passages two feet wide.
ff. Flues, one intended for smoke, and the other for ventilation.
g. Teacher's desk on a platform 5 by 8 feet.
h. Closet for books, &c.
k. Seats for four pupils each.
m. Entrance to the cellar.

pupils each. This building will be found convenient and ornamental when properly surrounded with trees, shrubbery, &c.

The size of this building is thirty by forty feet on the outside, story thirteen feet high in the clear, and pitch of roof nine feet.

SPECIFICATION.

The materials of the walls should be brick, and the cellar walls built up above the level of the ground, eighteen inches thick, with cellar door-way, and window openings secured with iron guards. A cut stone door sill will be required for the front door, twelve inches on the top face and eight inches rise. The walls from the surface of the ground upwards will be of brick; the outside four inches, to be the best quality dark stretchers with the joints smoothly struck; the thickness of the wall at the base and pilasters will be sixteen inches; in the recesses twelve inches, being a nine inch wall spread on the base, making an opening of three inches in the centre of the wall; the two surfaces to be bonded together with alternate headers every fifth course; the projection of the base to be finished on the top with headers. The flues will be made eight by twenty-four inches, thoroughly and smoothly pargeted and topped out on the roof for ventilators. The work to be done in a substantial and workmanlike manner, with mortar composed of clean, sharp sand and wood burnt lime. Plastering on the interior will be done in the same manner as the last; the jambs of the windows will be plastered and the angles rounded.

CARPENTER WORK AND MATERIALS.

The flooring joists will be eight by fourteen inches, and ceiling joists two by twelve, placed sixteen inches between centres, and the flooring joists strengthened with two lines of lattice bridging, well secured to the same; a raising piece will be spiked on the ceiling joists, and the rafters heeled against it; alternately the rafters will be continued over the wall, forming cantilevers to support the eaves; those from the gables will be framed into the outer rafter. The rafters will be framed and one and a half inch plank collar beams well spiked across the same. The rafters will be lathed and covered with the best white pine shingles, butted and jointed. A bell turret will be built according to the plan. The window frames will be made plank front or casing, and double hung. The sash and shutters to be made and hung as usual on the flank and back of the building; but on the front, inside shutters in one pair to each window, will be made and hung to open against the wall, and recesses in wall will be made to receive them; the sub-sills of the windows will be made of heart pine. A circular transom sash will be made over the front door. The doors will be made and secured as usual, excepting that in the partition between the lobby and clothes rooms, folding doors will be made and hung, so that they may be opened into one room for recitation or class purposes. The closets will be shelved in the usual manner, and the platform for the Teacher's desk made with eight inch rise. Wainscoting, black-board, inside dressings and jambs of doors, pinrails and hooks in recitation rooms, slats in main room for maps, cellar door and steps, and outside steps (of wood) and privy and fencing, will be done in the best manner.

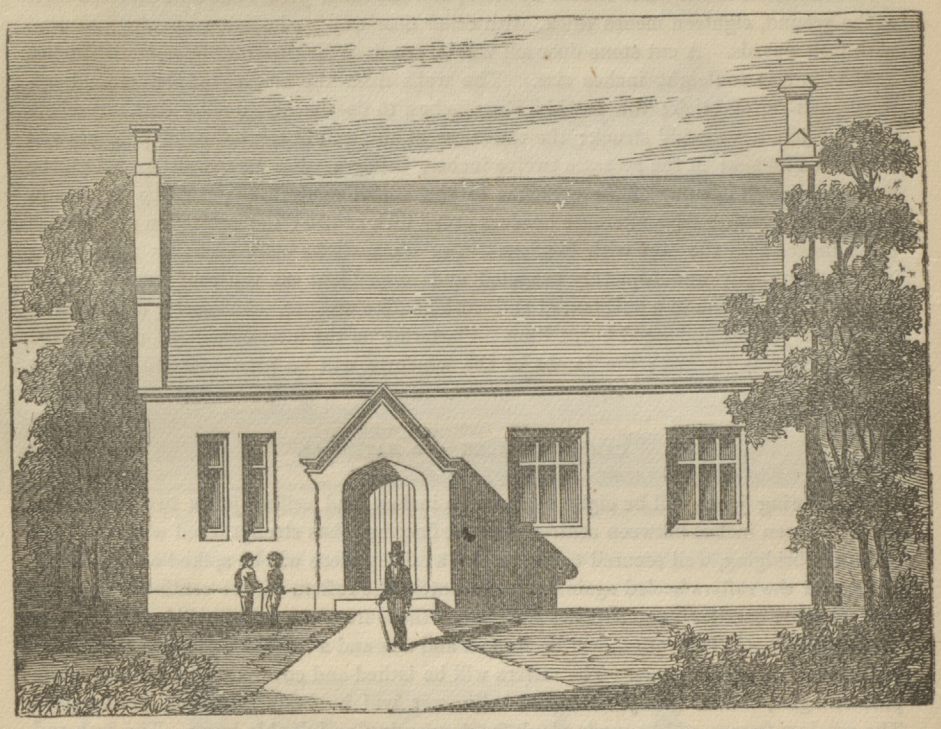
PAINTING AND GLAZING.

The wood work usually painted, will receive three coats in plain colors, with pure white lead and linseed oil. The sash all to be glazed with the best glass; the size of the glass will be thirteen by sixteen inches, eighteen lights in each frame on the side and back; the front frames to have twelve lights in each.

All the materials and workmanship to be of the best quality, and every thing to be furnished, requisite to complete the building in all its parts, in a substantial and workmanlike manner, and to the satisfaction of the Trustees.

ESTIMATE.

A building according to this plan, would cost nine hundred and fifty dollars without the cellar; or eleven hundred dollars with a cellar complete, as in the specification.



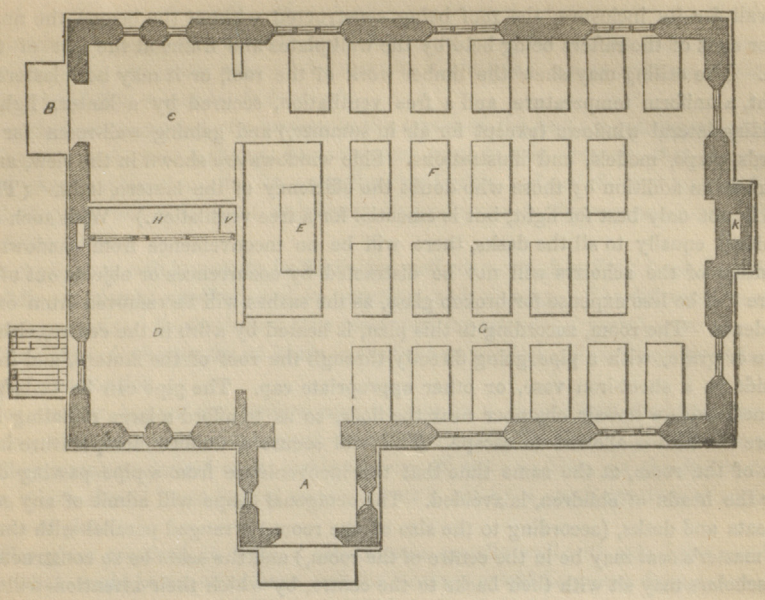
PLAN NO. 4. SIDE PERSPECTIVE, &C. FIG. I.

This plan is designed for forty-six pupils, but can be arranged for thirty-eight or fifty. It may be of stone or brick.

The artist has provided a separate entrance for boys and girls though they are to sit together in the same room.

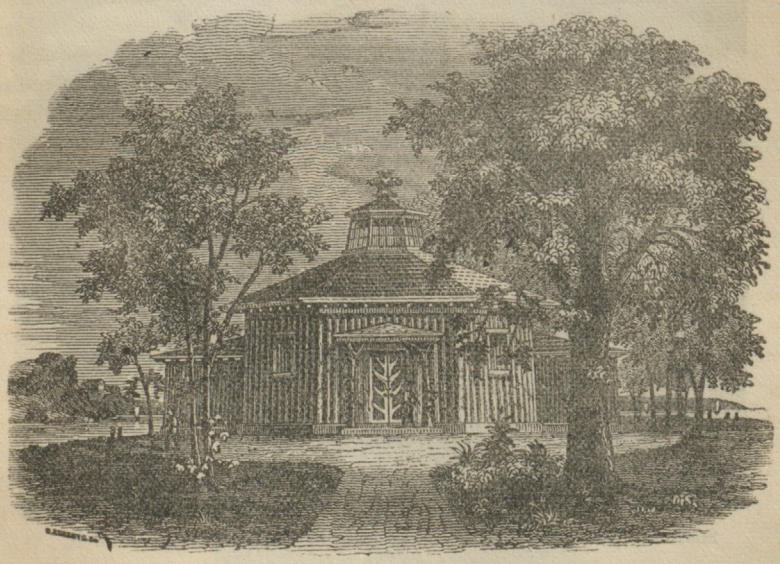
The size is twenty-three by thirty-four feet, and pitch of roof eleven feet; the story twelve feet in height in the clear, with a side porch; the walls of undressed stone or brick.

The cellar will be excavated under the building, with entrance, &c., and foundation trenches for the porch two feet below the surface of the ground. In regard to the details of the mason and carpenter's work, they can be determined upon by the Trustees, and inserted in the specifications. The specifications of the preceding plan will be a guide in this respect. The details of seating and warming will be given at the end.



PLAN NO. 4.—GROUND FLOOR—FIG. II.

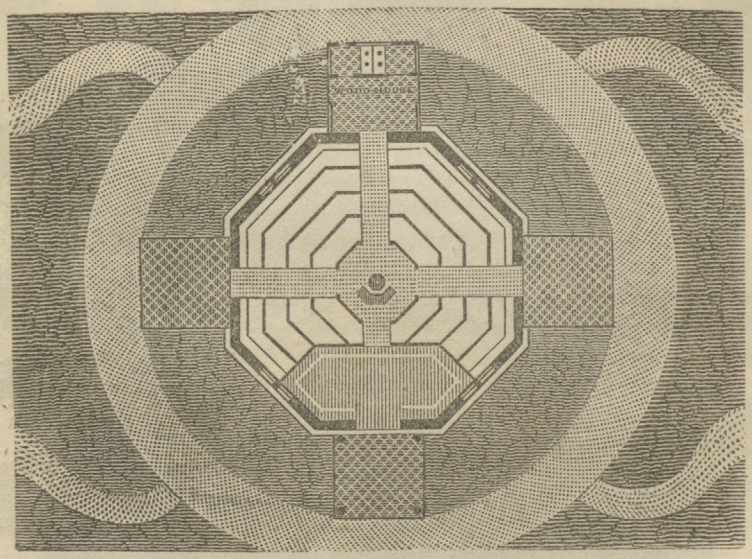
A. Outside porch and girls' entrance.
B. Boys' entrance.
C. Boys' clothes room.
D. Girls' clothes or gallery room.
E. Teacher's desk on a platform, 4 by 9 feet.
F. Seats for two pupils each.
G. Passage 2 feet wide.
H. Library.
K. Chimney flue.
L. Cellar entrance.
V. Ventilator.



PLAN NO. 5.—PERSPECTIVE AND GROUNDS OF AN OCTAGONAL SCHOOL-HOUSE.—FIG. I.

The above is a plan of a very beautiful rustic school-house and grounds. This design for a school-house intends to exhibit a model of fitness and close economy. The principles of fitness are, 1. Ample dimensions, with very nearly the least possible length

of wall for its inclosure, the roof being constructed without the beams, the upper and lower ends of the rafters being held by the wall plates and frame at the foot of the lantern. The ceiling may shew the timber work of the roof, or it may be plastered. 2. Light, a uniform temperature, and a free ventilation, secured by a lantern light, thus avoiding lateral windows (except for air in summer,) and gaining wall-room for blackboards, maps, models, and illustrations. Side windows are shown in the view, and may be made an addition by those who doubt the efficiency of the lantern light. (The lantern is not only best for light, but is essential for a free ventilation.) With such a light, admitted equally to all the desks, there will be no inconvenience from shadows. The attention of the scholars will not be distracted by occurrences or objects out of doors. There will be less expense for broken glass, as the sashes will be removed from ordinary accidents. The room, according to this plan, is heated by a fire in the centre, either in a stove or grate, with a pipe going directly through the roof of the lantern, and finishing outside in a sheet-iron vase, or other appropriate cap. The pipe can be tastefully fashioned, with a hot-air chamber near the floor, so as to afford a large radiating surface before the heat is allowed to escape. This will secure a uniform temperature in every part of the room, at the same time that the incovenience from a pipe passing directly over the heads of children, is avoided. The octagonal shape will admit of any number of seats and desks, (according to the size of the room,) arranged parallel with the sides. The master's seat may be in the centre of the room,) and the seats be so constructed that the scholars may sit with their backs to the centre, by which their attention will not be diverted by facing other scholars on the opposite side, and yet so that at times they may always face the master, and the whole school be formed into one class. The lobby next to the front door (see figure 2) is made large, (8 by 20) so that it may serve for a recitation room.



PLAN NO. 5—GROUND PLAN OF AN OCTAGON SCHOOL-HOUSE.—FIG. II.

This lobby is to finish eight feet high, the inside wall to show like a screen, and rising to the roof, and the space above be open to the school-room, and used to put away or station school apparatus. This screen-like wall may be hung with hats and clothes, or the triangular space next the window may be inclosed for this purpose. The face of the octagon opposite to the porch, has a wood-house attached to it, serving as a sheltered

way to a double privy beyond. This wood-house is open on two sides, to admit of a cross draught of air, preventing the possibility of a nuisance. Other wing-rooms may be attached to the remaining sides of the octagon, if additional inconveniences for closets, library, or recitation rooms be desired.

The mode here suggested of a lantern in the centre of the roof for lighting all common school-houses, is so great a change from common usage in our country, that it requires full and clear explanations for its execution, and plain and satisfactory reasons for its general adoption, and of its great excellence in preference to the common mode. They are as follows, viz.:

1. A skylight is well known to be far better and stronger than light from the sides of the building in cloudy weather, and in morning and evening. The difference is of the greatest importance. In short days (the most used for schools) it is still more so.

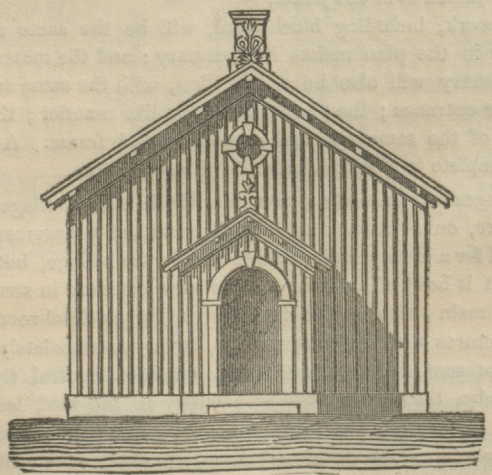
2. The light is far better for all kinds of study than side light, from its quiet uniformity and equal distribution.

3. For smaller houses the lantern may be square, a simple form easily constructed. The sides, whether square or octagonal, should incline like the drawing, but not so much as to allow water condensed on its inside to drop off, but run down on the inside to the bottom, which should be so formed as to conduct it out by a small aperture at each bottom pane of glass.

4. The glass required to light a school-room equally well with side lights would be double what would be required here, and the lanterns would be secure from common accidents, by which a great part of the glass is every year broken.

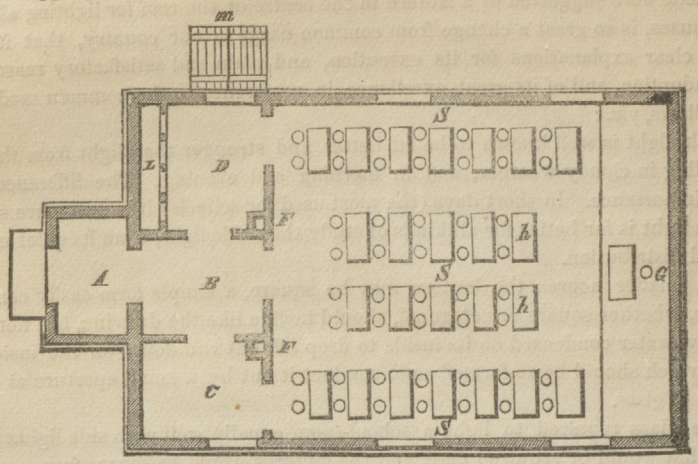
5. The strong propensity which scholars have to look out by a side window would be mostly prevented, as the shutters to side apertures would only be opened when the warm weather would require it for air, but never in cool weather, and therefore no glass would be used. The shutters being made very tight, by calking in winter, would make the school-room much warmer than has been common; and being so well ventilated, and so high in the centre, it would be more healthy.

6. The stove, furnace, or open grate, being in the centre of the room, has great advantages, from diffusing the heat to all parts, and equally to all the scholars: it also admits the pipe to go perpendicularly up, without any inconvenience, and it greatly facilitates the ventilation, and the retention or escape of heat, by means of the sliding cap above.



PLAN NO. 6.—END ELEVATION OF A PRIMARY SCHOOL HOUSE, REDUCED—FIG. I.

The size of this building is twenty-three by thirty-four feet, one story high, thirteen feet in the clear, and pitch of roof nine feet. The interior arrangements resemble many of the others, but in this an outside lobby is made at the entrance, which gives an additional room appropriated for library and recitation.



PLAN NO. 6.—FIRST FLOOR—FIG. II.

A. Lobby or outside porch, 5 by 6 feet.
B. Entrance, 8 by 8 feet.
C. Girls' bonnet room, 6 by 8 feet.
D. Boys' cap room, 6 by 8 feet.
FF. One a smoke flue, the other a ventilator brought together in the loft and topped out together.
G. Teacher's desk on a platform, 4 by 22 feet.
hh. Seats for two pupils.
L. Library.
m. Entrance to the cellar.
S. Passages or aisles.

In framing this building, it will be done so that the weather-boarding can be put on vertically. The rafters will be twenty inches between centres, with a collar beam of one and a half inch plank, well spiked across each, and the heel of the rafter notched out to rest upon the plate; the front part projecting and forming the support to the eave, and that portion of the rafter will be planed, as will also the projecting pieces supporting the roof at the gables. The weather-boarding will be planed, and beveled, and strips three inches wide firmly nailed over the joints.

The carpenter work, including blackboard, will be the same as others, excepting where the change in the plan makes it necessary; and the materials also of the best quality. The masonry will also be as the first, with the same arrangement of cellar windows and cellar entrance; the plastering also in like manner; the painting also the same, with glass of the same size and number in each frame. A well and privy, also fencing, and all complete to the satisfaction of the committee.

The following engraving presents a view of a Rhode Island village school-house. It is situated in a grove, on a little knoll, which admits of a basement room in the rear, originally designed for a library and reading-room for the village, but now occupied by a primary school. It is built of stone in a style very common in structures of this kind in England. The main room, which is intended for a school-room, although for the present used for lectures and religious exercises, is very appropriately finished—the walls being made to represent stone work of a very subdued neutral tint, and the ceiling, supported by wooden tracery, is finished partially in the roof, leaving the necessary open space above to protect the room from the effects of excessive heat and cold. The ceiling, wainscoting, seats, desks and doors, are grained in imitation of oak. It is thoroughly ventilated, and warmed by air heated in a chamber below.

In this very pleasing specimen of the Elizabethan style, and other varieties not com-

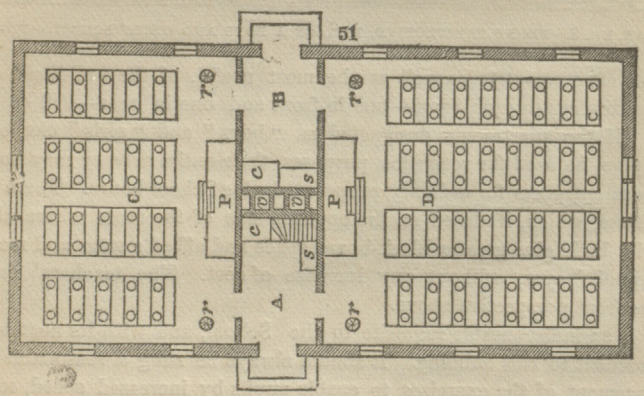


PLAN NO. 7.—END AND SIDE PERSPECTIVE OF A PRIMARY AND SECONDARY, OR BOYS AND GIRLS' SCHOOL, WITH GROUNDS, ETC.—FIG I.

monly introduced into structures of this kind, it is a pleasing variety in the style of architecture which characterizes the village and country school-houses of Canada.

In many neighbourhoods it is a matter of economy to build of stone, and where this is the case, the style of architecture should be adapted to the material.

The style and arrangement of the seats and desks is indicated in the illustrations given at the end. The end pieces are of cast-iron, and so shaped as to facilitate the sweeping of the room, and the pupils getting in and out of their seats, and at the same time are firmly attached to the floor by screws. This building is 30 feet by 20 feet.



PLAN NO. 7.—GROUND FLOOR OF A PRIMARY AND SECONDARY, OR BOYS AND GIRLS' SCHOOL-HOUSE.—FIG. II.

The accompanying Fig. II. exhibits the Ground Plan of the foregoing school-house, and is designed to afford accommodation for a Primary and Secondary department in the building. C. is the Primary, and D the Secondary, or Grammar School department. The room C is 25 feet wide by 22 feet long, with desks and seats attached for 60 pupils. The room D is 25 feet wide by 30 feet long, with desks and seats attached for 70 pupils. The building may, if desired, be used as a boys' and girls' school. A is the

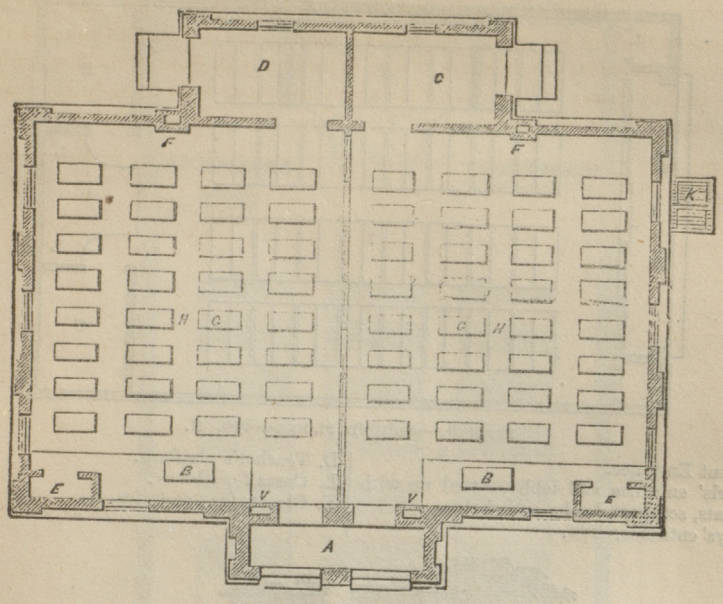
boys' entry, and is 6 feet wide by 10 feet long. B is the girls' entry, and is of the same dimensions as that for the boys. P, in either room, is the Teacher's Desk and Platform. The seats for the younger pupils are placed immediately in front of the Teacher's desks, and are slightly lower in their elevation above the floor, than those in the rear of the School-room. See illustrations in Part V., towards the close.



PLAN. NO. 8.—FRONT PERSPECTIVE, ETC., OF A BOYS AND GIRLS' SCHOOL.—FIG. I.

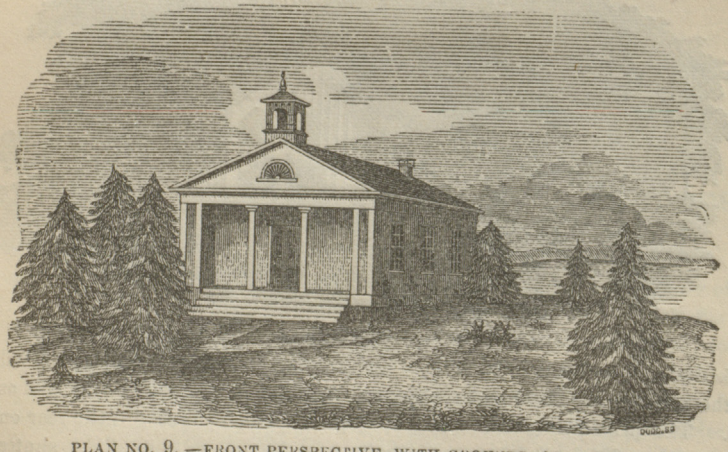
This is the most complete as well as the most useful, of the buildings of its class. The double entrances to each room—one in front and one in rear—will be found very convenient. If the apartments designated as "boys" and "girls" clothes rooms on the ground plan, be used for recitation purposes, their entire privacy may be effected by using the front entrances for ordinary purposes, during School hours. There is also here a long platform, which, if placed on the opposite side of the room where there are no windows, will both give greater black-board space and afford a safer and more pleasant light to the pupils' eyes, without any increase of cost. The teachers' entrances are shown in the front perspective above.

The bell is an indispensable requisite to the School, and with its neat belfry, forms quite an ornament to this building. It should always be rung a reasonable time before the commencement of the exercises, to enable pupils by increased speed, to be in their seats in due time; and the ringing of it, at the close of the fore and afternoon session, will enable parents within its sound, to know whether that loitering on the way home, which should not be permitted, has been practised. It need scarcely be stated, that it is the Teacher's duty to be on the ground some time before the regular exercises commence, and to be the last person on it after they close. If he practice this duty rigidly himself, and also hold his pupils responsible for the propriety of their behaviour on the way to and from school, he will soon find that their promptness and regularity will increase.



PLAN NO. 8.—GROUND FLOOR.—FIG. II.

A. Outside porch and entrance for Teachers, 4 feet by 8 feet in the clear.
BB. Teachers' desks; platforms 4 feet by 18 feet. 8 inch rise.
C. Boys' entrance & clothes' room, 8ft. by 12ft.
D. Girls' entrance & clothes' room, 8ft. by 12ft.
EE. Closets for books, &c.
FF. Gas flues.
GG. Seats for two Pupils each.
H. Passages two feet wide.
K. Entrance to the cellar.
VV. Ventilating flues.



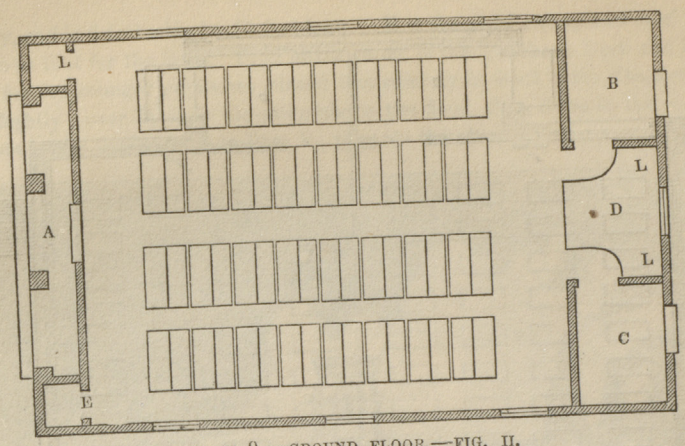
PLAN NO. 9.—FRONT PERSPECTIVE, WITH GROUNDS, &C.—FIG. I.

This building in the plan is agreably situated, and the grounds are secluded and well planted. It also stands back from the highway, and is thus free from noise and dust.

The building is 40 feet long by 25 wide, and 12 feet high in the clear.

The school room is calculated to accommodate 64 pupils, with seats and desks each for two pupils, and arranged as in figure 2.

The yards and entrance for the boys and girls are entirely separate, and each is appropriately fitted up with scraper, mats, broom, water-pails, sink, hooks and shelves.



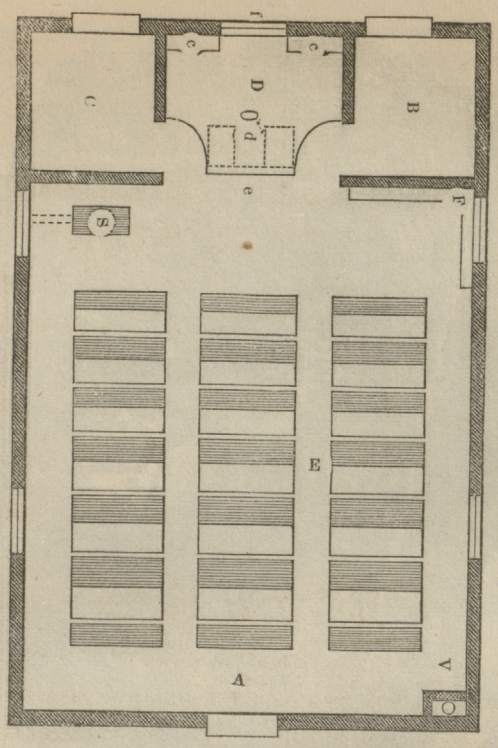
PLAN 9.—GROUND FLOOR.—FIG. II.

A. Front Entrance.
B. Girls' entrance and lobby, fitted up with mats, scrapers, hooks and shelves.
C. Boys' entrance, ditto.
D. Teacher's platform.
L. Cases for library.
E. Closets for apparatus, &c.



PLAN NO. 10.—END AND SIDE PERSPECTIVE, WITH GROUND, ETC.—FIG. I.

This design is in the pointed style of architecture. Any rectangular plan will suit it; and the principles of light and ventilation may be fully carried out in this as in other plans. The principal light is from one large mullioned window in the rear end. The openings side are for air in summer, not glazed, but closed with light shutters. The ventilator, as shown on the ridge of the roof of the building, may be of any required size, say 2 ft. wide and 12 in. high, sliding up and down between the stove pipe and the outward case, forming a cap to exclude water. This cap may be pushed up or let down by a rod affixed to the under edge, and lying against the smoke pipe. Height may be gained in the roof by framing with collar beams set up 4 or 5 feet above the eaves. The sides, if not of brick or stone, may be boarded vertically, as seen in the engraving.



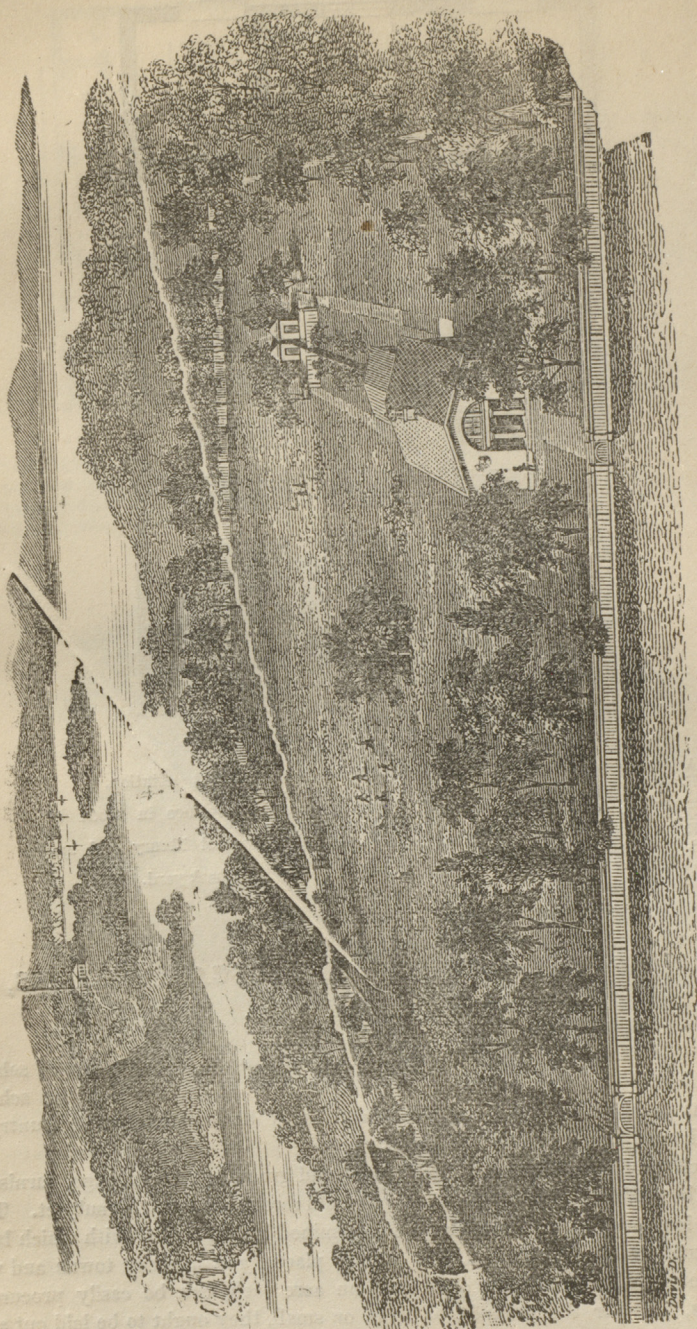
PLAN NO. 10.—GROUND FLOOR.—FIG. 11.

A Front entrance.
B. Girls' entrance and lobby.
C. Boys' do. do.
D. Teachers' Platform.
E. Seat and desk for the pupils.
S. Ventilating school stove.
V. Flue for ventilation.
F. Seats for classes at recitation.
d. Teacher's desk.
e. Library of reference in front of teacher's desk.
c. Closets for school library and apparatus.
f. Fence dividing back yard.

PART III.—SCHOOL SITES, LANDSCAPE, TREES, SHRUBBERIES, &c.

On page 10 of this work, we introduced some remarks on the proper sites of school-houses, and the various kinds of flowers, shrubs, and trees with which the school-grounds ought to be ornamented, and which can easily be procured in this country—they being indigenous to our soil and climate.

The perspective of school-house, out-buildings, and grounds, on next page, furnishes another and a beautiful illustration of what we would recommend on this subject. The size of school lots must, in somemeasure, be determined by the facility with which land in desirable situations can be obtained. In country places, and in many towns and villages, school lots of at least half or quarter of an acre each, can be easily procured. But in all cases, whether the grounds be large or small, they ought to be laid out and prepared with a view to both convenience and taste. Every thing around, as well as within a school-house should be attractive to the eye and improving to the taste of the pupils. It is in connexion with the school-house that they receive many of their earliest and most durable impressions. Those impressions should be on the side of

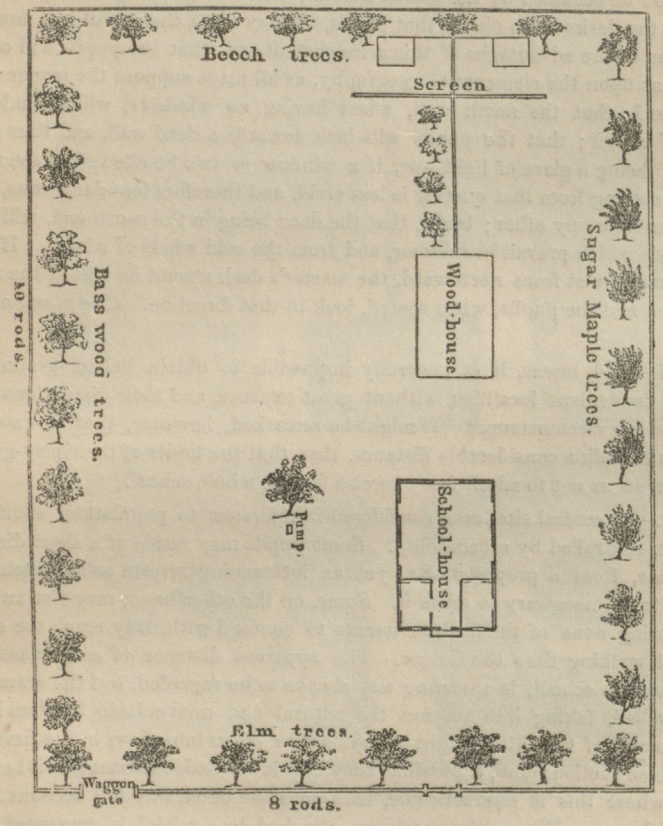


PLAN No. 1.—PERSPECTIVE VIEW OF SCHOOL-HOUSE, OUTBUILDINGS, AND GROUNDS.—(*Adapted to Plan No. 1, on page 33.*)

neatness, virtue and cheerfulness. This is not likely to be the case where the site of the schoo'-house is in a noisy, dirty thoroughfare of the city, or in a low, damp, or bleak, unsheltered place in the country; nor if all attraction to comfort and decency be neg'ected in the internal furniture and out-door arrangements of the house itself. How different

will be the associations, impressions, and feelings of a pupil where the house and grounds are provided as represented in the above engraving, from those of a pupil attending school where the house is dirty and comfortless, where the play grounds are the highway or the street, and where indecencies are almost imposed as a necessity from the absence of the requisite provisions against them.

In the engraving, it will be observed that the situation is represented as retired, dry, and pleasant; that the ground is made smooth, and sown with grass, planted with shady trees, tastefully arranged in groups, and round the sides, and protected by a neat and substantial inclosure. In the rear of the building the yard is divided by a high and close fence; each portion appropriately fitted up and provided with suitable conveniences,



Highway.

PLAN OF GROUNDS, ETC.—P.G. II.

—the one assigned for the exclusive use of the boys, and the other for that of the girls. The entire premises exhibit an aspect of seclusion, neatness, order, propriety and cheerfulness, and the absence of everything calculated to defile the mind, or wound the most sensitive modesty.

Figure II. is a block plan of school premises. In respect to one part of it we remark, that we think the fence or partition which separates the one part of the grounds from the other, ought to extend from the school-house to the wood-house, as well as from the latter to the rear of the premises.

Position.—It is very desirable that the front of the school-house be towards the south; that the north end be occupied by the master's desk; that this end may or may not be a dead wall; that the desks be so placed that pupils, as they sit at them, will look towards the north. Some of the advantages of this arrangement are, that the pupils will obtain more correct ideas upon the elements of geography, as all maps suppose the reader to be looking northward; that the north wall, when having no windows, will exclude the severest cold of winter; that the pupils will look towards a dead wall, and thus avoid the great evil of facing a glare of light—or, if a window or two be allowed in the north wall, the light coming from that quarter is less vivid, and therefore less dangerous, than that which comes from any other; lastly, that the door being in the south end, will open *towards* the winds which prevail in summer, and *from* the cold winds of winter. If from necessity, the house must front northward, the master's desk should be still in the north end of the room, and the pupils, when seated, look in that direction. (*See plan on page* 36.)

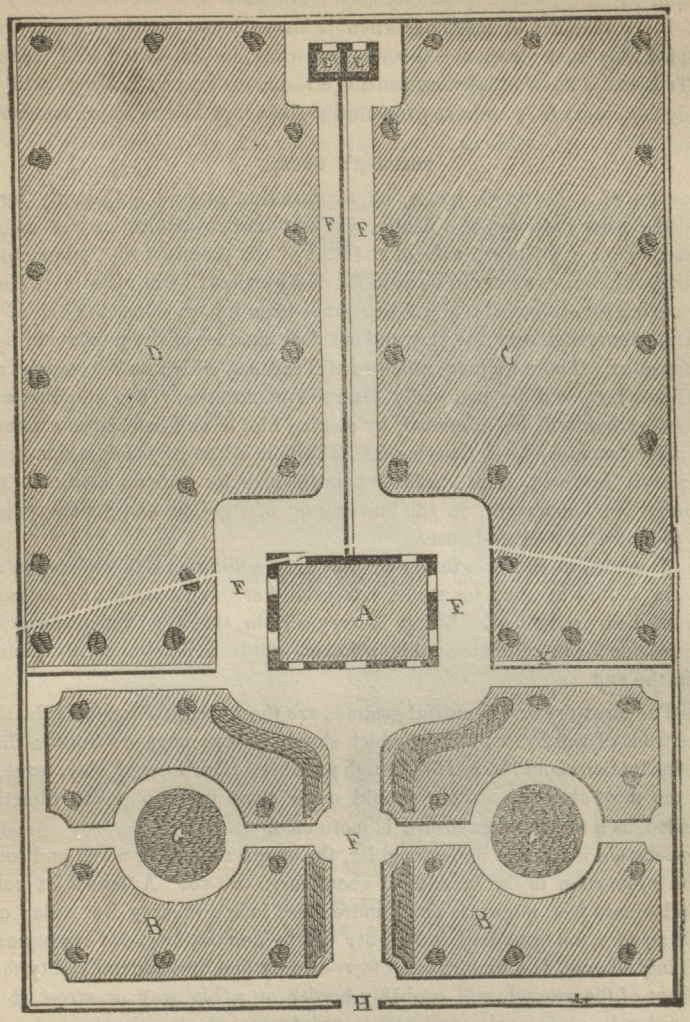
Size.—In cities and towns, it is generally impossible to obtain School grounds of proper size, in convenient localities, without great expense, and their dimensions must therefore depend on circumstances. It might be remarked, however, that it would be better for pupils to walk a considerable distance, than that the limits of their play-ground should be so narrow as not to admit free exercise for the whole school.

Accessibility.—A central site, even considered in reference to population, should be, to some extent, controlled by accessibility. Some pupils may reside at a short distance in a straight line, from a proposed site, yet an intervening stream or mountain may render miles of travel necessary to reach it. Some, on the other hand, may live twice as far off, yet, having none of these impediments to contend with, may reach the school with less actual walking than the former. The apparent distance of each class in a straight line from the school, is therefore not always to be regarded, but the actual distance to be travelled, taking into account the natural and unavoidable barriers in the way. Impediments of this kind ought always to be taken into view, in the first subdivision of a school section; and, if possible, they should be made the boundaries between schools. But where this is impracticable, they must be taken into full account in the location of the house. Where the territory attached to a school is traversed by a large stream or mountain, if there be a bridge over the one or a gap in the other, the vicinity of either will be, in point of mere accessibility, a fit location for the school. Territory level in its surface and undivided by considerable streams, is generally traversed in opposite directions by a system of public roads. If due and prudent advantage be taken of these, the accessibility of the site may be greatly promoted. On the whole, a central position, like accessibility, consists in promoting the convenience of the greatest possible number of pupils.

Wherever land can be had at reasonable rates, half an acre is the least amount that would well subserve the purposes of an ordinary school, and an acre would be none too much.

Sketch of Grounds, etc.—The following plans represent, each, the first named

quantity; but their application to a full acre will be a matter of no difficulty, and the addition will be greatly promotive of all the effects intended to be produced.



PLAN OF GROUNDS, ETC.—FIG. III.

A. School-house.
BB. Yard for shrubbery and flowers.
C. Boys' play-ground.
D. Girls' play-ground.
EE. Privies.
FF. Walks.
GG. Flower plats.
H. Gate.
L. Outside fences.
K. Dividing fences.

The artist in this plan has omitted to represent the extension of the dividing fence in the rear of the privy. Without this the design is incomplete.

This plan is intented to represent grounds of half an acre; in parallelograms of one-third greater in length than in breadth.

A different use, however, may ultimately be made of the other half acre that prudent foresight may add to the School grounds, and which will perhaps be the best that could possibly be made of it. Teaching has now assumed the rank of a profession. To retain it such, it must have its known permanent locality. The Clergyman resides near the church. The Lawyer has his office and his residence near the law courts. The Physician

places himself in the town, or other densest portion of the population to be benefitted by his skill. This is also the law of other avocations, whether mechanical or commercial. Each is found to have its appropriate locality. The same law will undoubtedly be found to govern the profession of teaching, when it shall be more fully developed and shall have occupied its proper place, as well as its true rank, in the land; and therefore, the Board of Trustees who shall earliest provide a residence for the Teacher, will be found most surely and most fully to have promoted permanency in the improvement of their schools.

TEACHER'S HOUSE.

The erection of a Teacher's house, on a portion of ground sufficiently large for a garden and the other purposes of a family, will be found economical as well as beneficial in many particulars. A fair estimate of the rent of the premises will reduce, to that extent annually, the compensation to be paid for his services. His vicinity to the school-house will enable him to guard it and the grounds from injury, when the School is not in session. His supervision over the play and out door conduct of the pupils will be greatly increased for good. Those frequent changes of Teachers, which now so much retard the progress of scholars, will be materially lessened in number. The standing and influence of the Teacher will be promoted, by placing him in and before the community, as a resident official member of it, laboring for its benefit in the most important department of its interests. In short, from whatever point it may be contemplated, the Teacher's house assumes an importance, in the building up of the Common School system, only secondary to that of the school-house.

It is not of course, intended to intimate, that this addition to the necessary agencies of the system should at once be made, nor even that the means of any section should be over-strained to promote it. But it is very certain, that the prudent forecast which shall now provide for its ultimate accomplishment, will be most abundantly justified and rewarded in the end.

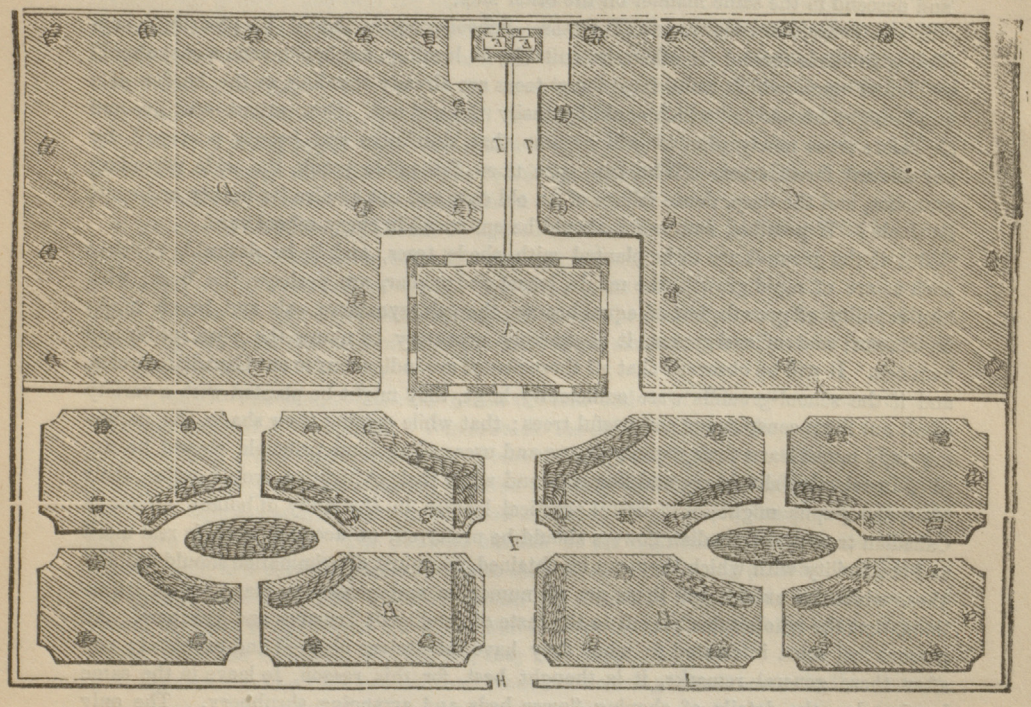
SHAPE.—The most dry and beautiful grounds are those which slope towards the south or from the front of the School-house, which should always have its front in that direction. The inclination should be gentle, though perhaps for purposes of play, level grounds would be the most suitable. They should never slope in the opposite direction, if it can be avoided, as a northern exposure is more cold.

The shape should if possible be rectangular, the length extending north and south, and bearing the proportion to the breadth of about three to two. A School lot containing six thousand square feet, might be one hundred feet long and sixty feet wide; one containing half an acre, one hundred and eighty feet by one hundred and twenty-one; and one containing an acre, two hundred and forty-two by one hundredand eighty feet.

As the front of the grounds will probably border on a highway or street, it will be better, in order to escape noise and secure uninterrupted attention to study, to place the School-house in the back part of the grounds, on a line extending lengthwise through the centre of them. A planked walk should extend from the gate-way to the house, terminating at the boarded portico immediately in front of it. A close and high board fence should extend from behind the house to the centre of the fence at the back end of the grounds. Walks might also extend on a line with the front of the house to both sides. The two spaces thus cut off, should be private, in mixed Schools, one for each sex; and the large space in front be enjoyed by both in common. The former might be laid out in grass plots with shrubbery and beds for flowers, and the latter, especially in towns and cities, should be paved with brick. Brick will be more costly than sand or gravel, but answer a better purpose. The hardened soil would answer well except in damp or wet weather. There should be shade trees in all parts of the grounds, but special care should be taken in this respect with the private spaces previously de-

scribed. In grounds like these, pupils desiring to read or study could do so without interruption, amidst the shrubbery and shade of those portions appropriated to this object; and others, wishing to watch the sportive game or enlist among the players, could enjoy that opportunity, unmolesting and unmolested.

The first of these plans is arranged with the flower garden in the front of the building, and the play-ground in the rear of it; the second differs from the first by having the lot lengthwise to the road or street. Either plan can be selected according to the taste of the Trustees and others interested, and can be modified to suit the size, shape, and slope of the grounds.



PLAN OF GROUNDS, ETC.—FIG. IV.

A. School-house.	D. Girls' play-ground.	GG. Flower plats.	II. Outside fences.
BB. Grass and flower-beds.	EE. Privies.	H. Gate.	K. Dividing fences.
C. Boys' play-ground.	FF. Walks.		

The School-houses in the plans have been drawn with their longest side towards the front. This is not advisable. The school-houses should front towards the south. In that case, if the narrowest side or end be placed towards the front, and occupied by entries and clothes-rooms, no light will be admitted into the School-room from the south; and if the opposite end be occupied by platform and black board, the light will all enter from the east and west. By this arrangement, also, the Teacher will have all the pupils before him.

THE ENCLOSURE.—The enclosure should combine the qualities of neatness and substantiality. A wall has been recommended by some, and it would undoubtedly possess the latter quality. It could not beeasily broken down; and, if sufficiently high, would enable the children, when at play, to conduct their sports unobserved; but school grounds thus enclosed have too much the appearance of those belonging to a prison. They have a heaviness and gloom about them, which are neither pleasant to the feelings nor congenial to the taste. Cast-iron paling, now furnished in such a variety of pat-

terns, it is presumed, would cost less, be equally substantial, and certainly, much more beautiful. A neat pale or board fence, strongly made, with posts sunk deeply into the ground, would however, be cheaper than either, and might be so constructed as to be an ornament to the grounds. The paling should be close and firmly morticed to the rails. The fence should be six feet high, and by all means painted white, or at least white-washed. If the entrance to the yard be through a gate, it should be hung with weights so as to close of itself when left open; but some grounds are entered by short flights of steps, or a stile, which ascend to a landing nearly on a level with the top of the fence, and descend in the same manner on the other side.

Shade Trees, Shrubbery, and Flowers.—School-grounds should be plentifully supplied with shade trees. If otherwise suitable, in locating a school-house, a spot should be chosen upon which some large forest teees are already standing, or the border of a wood might be selected which could be easily thinned out. Generations must live and die before trees newly planted will assume that stateliness and beauty possessed by our ancient forest trees. Who can gaze upon the noble trunk, the wide spreading branches, and the deep, dense foliage of an old oak, and not admire its beauty and court its shade? If possible, some such should be embraced in every school yard.

But if the grounds are to be planted with shade trees, and it be desirable to select such as are of rapid growth, the maple, locust and poplar, are perhaps the best; with less rapidity of growth, but of equal beauty, the oak, sycamore, ash and beech might be chosen; and of evergreens, it is scarcely necessary to name the pine, cedar and hemlock. It will be observed that all those named are indigenous to our Canadian forests, and if the school-grounds were sufficiently large, they might be planted with a variety of all our most conspicuous and useful trees; that while enjoing their shade, the inquiring pupil might learn their names, classes and uses. The same principle should be applied in selecting shrubbery and flowers; and while their cultivation would refine their taste, the pupils might learn useful practical lessons in the study of botany. Though Canadian trees and Canadian flowers should be preferred, on account of their real merit and the facility with which they can be obtained, no unjust discrimination should prohibit those which are exotic; but these are so numerous and possess so many varied attractions, that the whole subect is left to the taste of intelligent Trustees and Teachers. All persons feel most interested in what they have themselves planned and executed; and after these general remarks, it is thought best, for this reason, to leave in the same hands, also, the details of shaping flower beds and arranging shrubbery. The only additional remark which it is thought necessary to make, is that no fruit or nut trees of any kind should be admitted in the grounds; first, because the fruit would be seldom suffered to ripen, and green fruit, if eaten, is injurious to health; and second, because the trees would be broken and destroyed in efforts to obtain the fruit.

PART IV.—INTERIOR OF THE SCHOOL-HOUSE:

I. HEATING AND VENTILATING.

We now proceed to make some remarks on the interior construction and arrangements of the School-house.

1. Size.—Each School-house should be sufficiently large to allow every pupil; 1. To sit comfortably at his desk; 2. To leave it without disturbing any one else: 3. To see explanations on his lessons, and to recite, without being incommoded or incommoding others; 4. To breathe a wholesome atmosphere. For the accomplishment of this last not less than 150 cubic feet of air should be allowed for every pupil.

2. Platform and Shelves.—The master's platform may be raised about eight inches;

and the end of the room occupied by him should be filled with shelves for a library, and for philosophical apparatus and any collections of natural curiosities (such as rocks, minerals, plants, shells, &c.,) which may be made in the neighborhood, or obtained from abroad. The books, apparatus, and collections should be protected by doors, which may be made perfectly plain and without panels, so as to be painted black, and serve as blackboards if necessary. They may be conveniently divided *by pilasters* into three portions —the middle one for books, the other for apparatus and collections. On one of the pilasters may be a clock; on the other a barometer and thermometer; on shelves in the corners, the globes; and over the library, in the centre, may be the time table. One of the pilasters may form part of the ventilating tube. The space for the platform, shelves, &c., between the front range of desks and the north wall, should be from seven to ten or twelve feet, according to the size of the room and the number of pupils contemplated. The sides and front of this space should be furnished with seats, ten or eleven inches wide, for very young pupils when the school is large, and sometimes for classes reciting. By means of a large moveable blackboard, this space may be in case of need, divided into two, so that two classes may recite at a time.

3. Entry, &c.—The entry should be lighted by a window, and furnished with hooks or pins, for the accommodation of hats, bonnets, and cloaks; and a wood-closet, large enough to contain one or two cords of wood. By making the ceiling of the entry and wood-closet only seven feet high, two commodious rooms for recitation may be formed above them, lighted from the windows over the front door, and accessible by stairs from within the school-room.

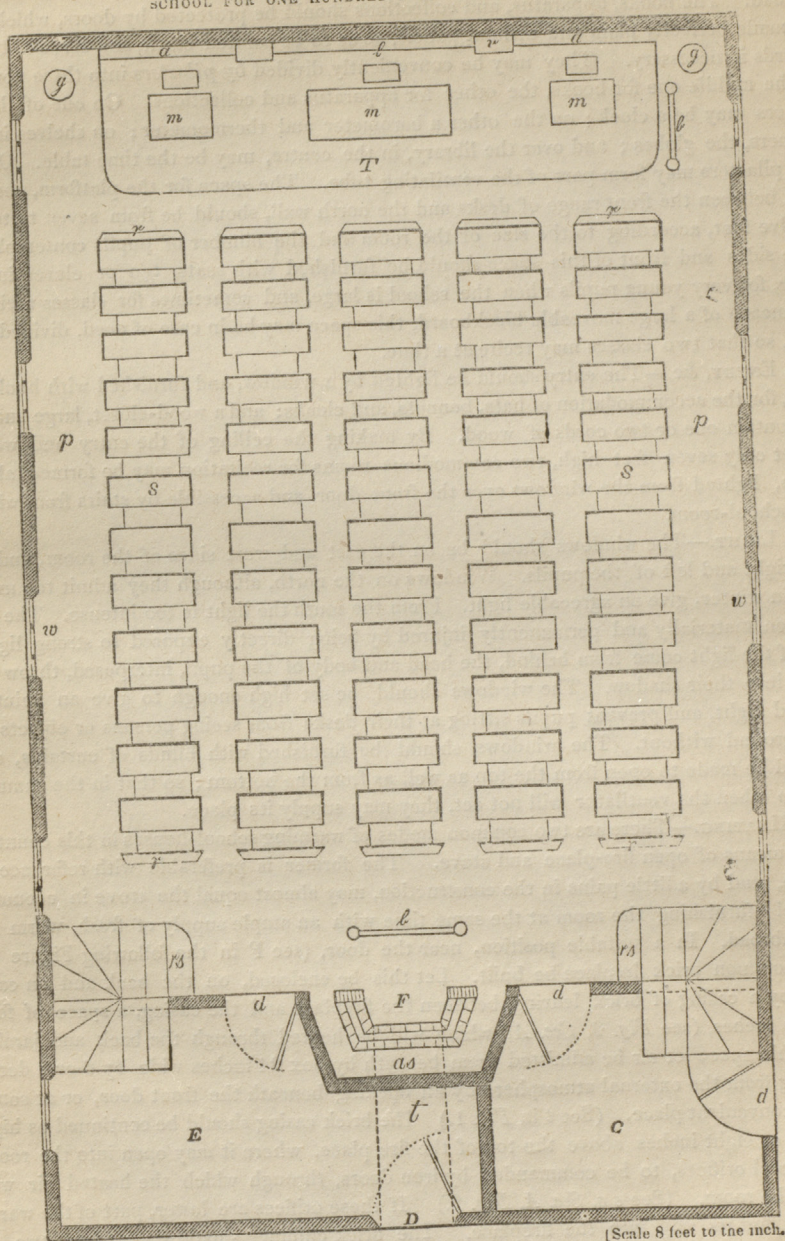
4. Light.—The windows should be on the east and west sides of the room, and on the right and left of the pupils. Windows on the north, although they admit too much cold in winter, give an agreeable light. From the south the light is too intense. The eye is often materially and permanently injured by being directly exposed to strong light; and if the light come from behind, the head and body of the pupil, interposed, throw the book into their shadow. The windows should, be set high enough to give an uninterrupted light, and prevent pupils sitting at their desks from seeing persons or objects on the ground without. The windows should be furnished with blinds of curtains, and should be made to open from the top as well as from the bottom; so that in the summer season when the ventilator will not act, they may supply its place.

5. Heating.—There are two common modes of warming school-houses in this country, —by means of open fire-place and stove. The former is preferable with reference to health, and by a little pains in the construction, may almost equal the stove in economy of fuel—furnishing the room at the same time with an ample supply of fresh, warm air from abroad. In a suitable position, near the door, (see F in the following Figure 1,) let a common brick fireplace be built. Let this be enclosed, on the back and on each side, by a casing of brick, leaving, between the fireplace and the casing, a space of four or five inches, (see *Fig.* 2, *Sec. A*,) which will be heated through the back and jambs. Into this space let air be admitted from beneath by box 24 inches wide by 6 or 8 deep, leading from the external atmosphere by an opening beneath the front door, or at some other convenient place. (See *t* in *Fig.* 1.) The brick casing should be continued as high as six or eight inches above the top of the fire place, where it may open into the room by lateral orifices, to be commanded by iron doors, through which the heated air will enter the room. (See *e e*, *Sec. A*, *Fig.* 2.) If these orifices are lower, part of the warm air will find its way into the fireplace. The brick chimney should rise at least two or three feet above the hollow back, and may be surmounted by a flat iron, soap-stone, or brick-top, with an opening for a smoke-pipe, which may thence be conducted to any part of the room, the same as a common stove-pipe. The smoke-pipe should rise a foot, then pass to one side, and then, over a passage, to the opposite extremity of the room, (when

its heat having been exhausted) it should ascend perpendicularly and issue above the roof. (See *i* in *Fig.* 2, C C in *Fig.* 3.)

FIG. 1.

SCHOOL FOR ONE HUNDRED AND TWENTY PUPILS.



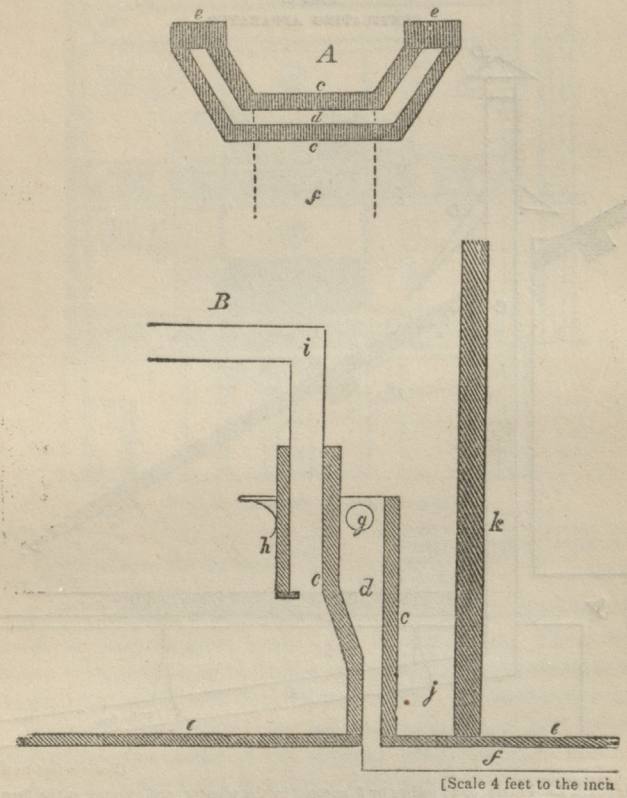
51 feet by 31 feet outside.] [Scale 8 feet to the inch.

D. Entrance door. E. Entry. F. Fireplace. C. Wood closet. T. Teacher's platform. *a*. Apparatus shelves. *t*. Air tube beneath the floor. *d*. Doors. *g*. Globes. *l*. Library shelves. *m*. Master's table and seat. *p* Passages. *r*. Recitation seats. *s*. Scholars' desks and seats. *r s*. Stairs to recitation rooms in the attic. *v* Ventilator. *w*. Windows. *b*. Movable blackboard. *a s* Air space behind the [illegible]

The following are some of the advantages of this double fireplace ; 1. The fire, being made against brick, imparts to the air of the apartment no deleterious qualities which are produced by the common iron stove, but gives the pleasant heat of an open fire place. 2. None of the heat of the fuel will be lost, as the smoke-pipe may be extended far enough to communicate nearly all the heat contained in the smoke. 3. The current of air heated within the hollow back, and constantly pouring into the room, will diffuse an agreeable heat throughout every part. 4. The pressure of the air of the room will be constantly outward, little cold will enter by cracks and windows, and the fire-place will have no tendency to smoke.

FIG. 2.

FIREPLACE.



[Scale 4 feet to the inch

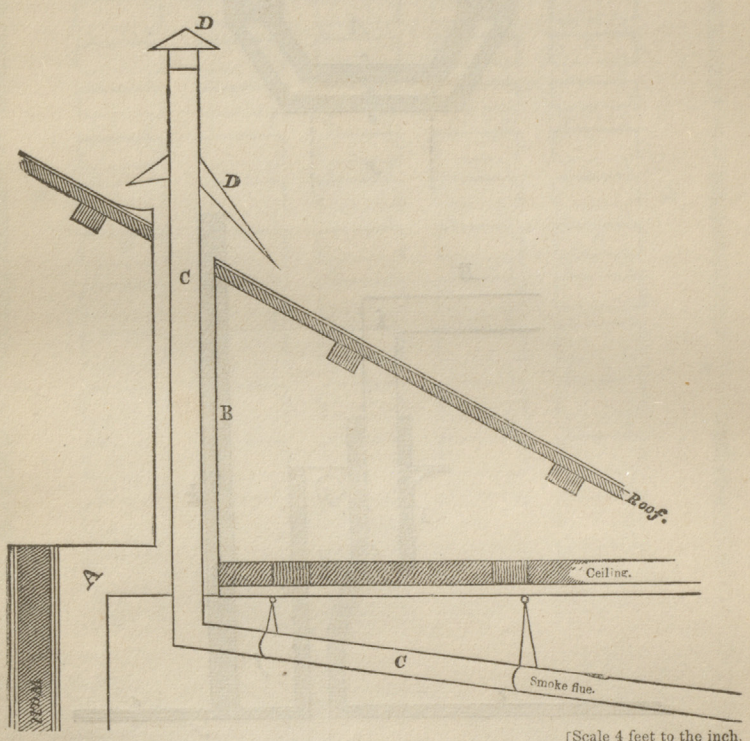
A. Horizontal section.
B. Perpendicular section.
c. Brick walls, 4 inches thick.
d. Air space between the walls.
e. Solid fronts of masonry.
f. Air box for supply of fresh air, extending beneath the floor to the front door.
g. Openings on the sides of the fireplace for the heated air to pass into the room.
h. Front of the fireplace and mantelpiece.
i. Iron smoke flue, 8 inches diameter.
j. Space between the fireplace and wall.
k. Partition wall.
l. Floor.

If instead of this fireplace, the common stove be adopted, it should be placed above the air-passage, which may be commanded by a valve or register in the floor, so as to admit or exclude air. The stove should be placed a little in front of the position assigned to the fire-place in *Fig.* 1.

6. VENTILATION.—As the best possible ventilator is an open fire-place a room warmed by such a fire-place as that just described may be easily ventilated. If a current of air is constantly pouring in, a current of the same size will rush out wherever it can find

an outlet, and with it will carry the impurities with which the air of an occupied room is always charged. For this an open fire-place may suffice. But when the room is warmed by a common stove, other provisions must be made for its ventilation. In addition to the various modes of ventilation previously described in this wook, we may remark, that a most effective ventilator for throwing out foul air is one opening into a tube which encloses the smoke-flue at the point where it passes through the roof, as represented by *B* in *Fig.* 3. Warm air naturally rises. If a portion of the smoke flue be enclosed by a tin tube, it will warm the air within this tube, and give it a tendency to rise. If then a wooden tube, opening near the floor, (see *Fig.* 3,) be made to communicate, by its upper extremity, with the tin tube, an upward current will take place in it, which will always act whenever the smoke-flue is warm.

FIG. 3.
VENTILATING APPARATUS.



[Scale 4 feet to the inch.

A. Air box, 1 foot square, or 24 inches by 6, covered by the pilaster, and opening at the floor, in the base of the pilaster.
B. Round iron tube, 15½ inches in diameter, being a continuation of the air box, through the centre of which passes,
C. The smoke flue, 8 inches diameter
D Caps to keep out the rain.

For further details and arrangements we refer to the explanations connected with the plates.

As heating by hot air is more generally adopted, we give in Fig. 4 a transverse section of two stories of a grammar school-house thus heated, and exhibiting the interior arrangements, maps, master's desk, clocks, black-board, seats, hot air and ventilating apparatus, &c. The flues for hot air to the upper floor should be conveyed in the flues and enclosed in the partition.

Figure 5 gives a lateral section of the ventiducts or foul air flues, showing the manner

in which the flues are packed together, and carried up separately from the floor of each room until they discharge into the common ejector at the apex of the roof.

FIG. 5.

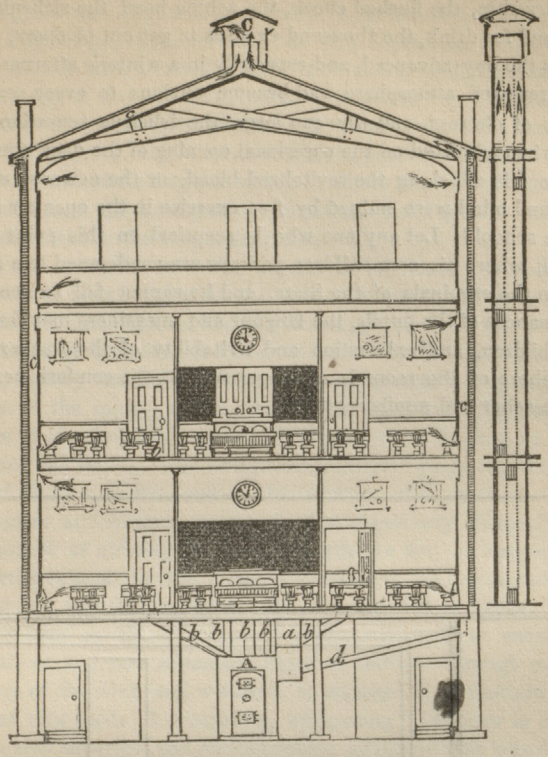


FIG. 4.—SECTION OF SCHOOL-HOUSE.

F. Hot air furnace.
a. Cold air ducts.
bbbbb. Hot air ducts to the registery in the floors.
c. Foul air ducts—the passage into, and through, which is indicated by an arrow.
d. Smoke flue.

A simpler form of heating and ventilation is given in the following figure 6 (p. 68.) The stove is not the ordinary kind, but is a new form of heater. The cold air is brought in under thefloor from outside, as indicated by the arrow, and passing round the heated stove, is thrown off at either side through two ducts. The smoke-pipe is carried in the usual way, (high enough to prevent any injurious radiation of heat upon the heads of the pupils below), to the centre of the opposite end of the room, where, after passing through the ceiling, it enters the ventilating flue, which, commencing at the floor, (see direction of the arrows,) is carried up through the attic, and out above the roof. The heat of the smoke-pipe produces a lively current of air in the upper portion of the ventilating flue, sufficient to draw off the lower stratum of air near the floor, and atthe same time diffuse equally through the school-room the fresh air which is introduced and warmed by the heater at the opposite end of the room.

The importance of fully providing for the efficient warming and ventilation of school-houses, is thus treated in Barnard's School Architecture:

SYMPTOMS OF BAD AIR IN A SCHOOL ROOM.—Every man and woman, who received any portion of their early education in the common school, can testify to the narrow dimensions, and low ceiling of the school-rooms, and to the discomfort arising from the close, stagnant, offensive atmosphere, which they were obliged to breathe. Who does not re-

member the comparative freshness and vigor of mind and body with which the morning's study and recitations were begun, and the languor and weariness of body, the confusion of mind, the dry skin, the flushed cheek, the aching head, the sickening sensations, the unnatural demand for drink, the thousand excuses to get out of doors, which came along in succession as the day advanced, and especially in a winter's afternoon, when the overheated and unrenewed atmosphere had become obvious to every sense? These were nature's signals of distress, and who can forget the delicious sensations with which her balmy breath, when admitted on the occasional opening of the door, would visit the brow and face, and be felt all along the revitalized blood, or the newness of life with which nerve, muscle, and mind were endued by free exercise in the open air at the recess, and the close of the school? Let any one who is sceptical on this point visit the school of his own section, where his own children perhaps are condemned to a shorter allowance of pure air than the criminals of the State, and he cannot fail to see in the pale and wearied countenances of the pupils, the langour and uneasiness manifested, especiall be the younger children, and exhaustion and irritability of the teacher, a demonstration that the atmosphere of the room is no longer such as the comfort, health, and cheerful labor of both teacher and pupils require.

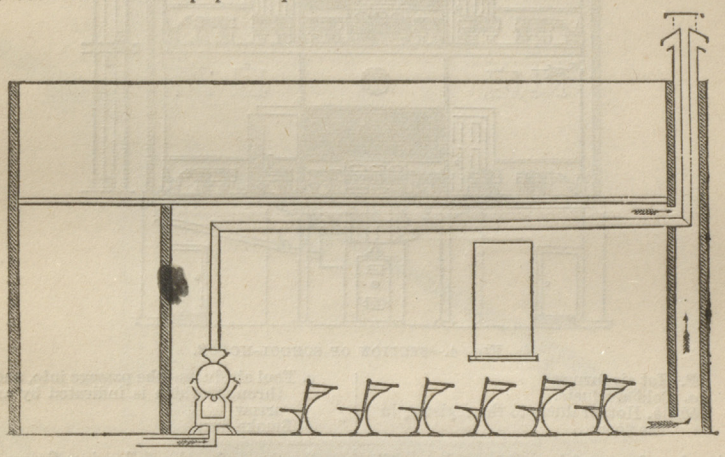


FIG. 6.—SECTION, WITH STOVE, ETC.

EFFECTS OF BAD AIR ON THE HEALTH OF TEACHERS AND PUPILS.—In this way the seeds of disease are sown broadcast among the young, and especially among teachers of delicate health. "In looking back," says the venerable Dr. Woodbridge in a communication on school-houses to the American Institute of Instruction, "upon the languor of fifty years of labor as a teacher, reiterated with many a weary day, I attribute a great proportion of it to *mephetic air;* nor can I doubt, that it has compelled many worthy and promising teachers to quit the employment. Neither can I doubt, that it has been the *great cause* of their subsequently sickly habits and untimely decease." A physician in Massachusetts, selected two schools, of nearly the same number of children, belonging to families of the same condition of life, and no causes, independent of the circumstances of their several school houses, were known to affect their health. One house was dry and properly ventilated—the other damp, and not ventilated. In the former, during a period of forty-five days, five scholars were absent from sickness to the amount in the whole of twenty days. In the latter, during the same period of time, and from the same cause, nineteen children were absent to an amount in all of one hundred and forty-five days, and the appearance of the children not thus detained by sickness indicated a marked difference in their condition as to health.

The necessity of renewing the atmosphere, does not arise solely from the consumption of the oxygen, and the constant generation of carbonic acid, but from the presence of other destructive agents and impurities. There is carburetted hydrogen, which Dr. Dunglinson in his Physiology, characterizes, "as very depressing to the vital functions. Even while largely diluted with atmospheric air, it occasions vertigo, sickness, diminution of the force and velocity of the pulse, reduction of muscular vigor, and every symptom of diminished power." There is also sulphuretted hydrogen, which the same author says, in its pure state, kills instantly, and in its diluted state, produces powerful sedative effects on the pulse, muscles, and whole nervous system. There are also offensive and destructive impurities arising from the decomposition of animal and vegetable matter in contact with the stove, or dissolved in the evaporating dish.

Two objects to be attended to.—The objects to be attained are—the removal of such impurities, as have been referred to, and which are constantly generated, wherever there is animal life and burning fires, and the due supply of that vital principle, which is constantly consumed by breathing and combustion. The first can be in no other way effectually secured, but by making provision for its escape into the open air, both at the top and the bottom of the room ; and the second, but by introducing a current of pure air from the outside of the building, warmed in winter by a furnace, or in some other mode, before entering the room. The two processes should go on together, i. e., the escape of the vitiated air from within, and the introduction of the pure air from without. The common fire-place andchimney secures the first object very effectually, for there is always a strong current of air near the floor, towards the fire, to support combustion, and supply the partial vacuum in the chimney occasioned by the ascending column of smoke and rarified air, and in this current the carbonic acid and other impurities will be drawn into the fire and up the chimney. But there is such an enormous waste of heat in these fire-places, and such a constant influx of cold air through every crevice in the imperfect fittings of the doors and windows, to supply the current always ascending in the chimney, that this mode of ventilating, by opening a window or door, although better than none, is also imperfect and objectionable; as the cold air falls directly on the head, neck, and other exposed parts of the body, when every pore is open, and thus causes discomfort, catarrh, and other more serious evils, to those sitting near, besides reducing the temperature of the whole room too suddenly and too low. This mode, however, should be resorted to at recess.

Openings for Ventilation.—There should be one or more openings, expressly for ventilation, both at the top and the bottom of the room, of not less than twelve inches square, capable of being wholly or partially closed by a slide of wood or metal, and, if possible, these openings, or the receptacle into which they discharge, should be connected with the chimney or smoke-flue, in which there is always a column of heated air. By an opening in or near the ceiling, the warmer impurities (and air when heated, and especially when over-heated, will retain noxious gases longer) will pass off. By an opening *near the floor*, into the smoke-flue, the colder impurities (and carbonic acid, and the other noxious gases, which at first rise, soon diffuse themselves through the atmosphere, cool, and subside toward the floor) will be drawn in to supply the current of heated air and smoke ascending the chimney. These openings, however, may let cold air in, and will not always secure the proper ventilation of a school-room, unless there is a current of pure warm air flowing in at the same time. Whenever there is such a current, there will be a greater economy, as well as a more rapid and uniform diffusion of the heat, by inserting the outlet for the vitiated air near the floor, and at the greatest distance from the inlet of warm air.

Evils of Low Temperature.—There is a mischievous error prevailing, that if a room is kept at a low temperature there is no need of ventilation. Dr. Alcott mentions the

case of a teacher, who when asked if she did not find it difficult to keep her room ventilated, replied, "not at all, it is one of the coldest rooms in the city." The necessity of ventilation arises from the consumption of the oxygen, and the generation and accumulation of carbonic acid, principally in breathing, and both of these processes can go on and do go on, in a cold room, as well as in a warm one, if human beings are collected in it, and goes on rapidly and fatally according to the number of persons and the size and closeness of the apartment.

Importance of uniform Temperature.—But whatever may be the mode of warning adopted, whether by open fireplace, or grate, stove wood or coal, or furnace, the temperature of the room should be uniform, and of the proper degree in every part. Not a child should be exposed to sudden and extreme changes of temperature, or compelled when overheated, or at any time, to sit against an inlet of cold air, or, with cold feet. This last is a violation of an indispensable condition of health. To secure a uniform temperature, a thermometer will not only be convenient, but necessary. It cannot be ascertained, for different parts of a room or for thirty or forty persons, differently circumstanced as to heat or cold, or differently employed, some of whom are seated, some standing or changing, their position from time to time, without some less variable and uncertain standard than the teacher's feelings. However anxious he may be to make every scholar comfortable, he cannot be conscious at all times of the differing circumstances in which they are placed. He is not exposed to the rush of cold air, from a broken or loose window, or from cracks in the ceiling or in the floor. He is not roasted by a seat too near the the stove. He is not liable to a stagnation of the blood in the feet from want of exercise or an inconvenient bench. Even though he were capable of thus sympathizing with them, the temperature of the room after the fire is thoroughly going, and the doors closed, may pass gradually from 65° to 70° without change being perceptible. Now though we may breathe freely in such an atmosphere, gradually heated, we cannot pass into the open air 40° or 50° colder, as would be the case on most winter days, and much less receive a current of such air on a portion, and a sensitive portion of the body, without great danger. With a thermometer in a room, the beginning and progress of such a change would be indicated, and could be guarded against.

Best mode of Ventilation.—The best mode, however, at the same time of warming and ventilating a school-room, especially if it is large, is by pure air heated in a stove or furnace placed in the cellar or a room lower than the one to be warmed. No portion of the room, or the movements of the scholars, or the supervision of the teacher, are encumbered or interrupted by stove or pipe. The fire in such places can be maintained without noise and without throwing dust or smoke into the room. The offensive odors and impurities of burnt air, or rather of particles of vegetable or animal matter floating in the air, are not experienced. The heat can be conducted into the room at different points, and is thus diffused so as to secure a uniform summer temperature in every part of it. A room thus heated, even without any special arrangements for this object, will be tolerably well ventilated, for the constant influx of warm pure air into the room will force that which is already in it out at every crack and crevice, and thus reverse the process which is ordinarily going on in every school-room. By an opening or rather several small openings into the ceiling, or a flue, which in either case should connect with the outer air, the escape of the impure air will be more effectually secured.

PART 5.—INTERIOR OF SCHOOL-HOUSE,

SCHOOL FURNITURE, SEATING, &C.

In the selection of plans for and the construction of school furniture, it is recommended that Trustees consult some experienced teacher on the subject, and visit schools

which contain articles of an appropriate kind. Having thus made their selection, the furniture should either be constructed by some person engaged in the business, as in Toronto, Markham and Oshawa, or according to the plan and form of a model article of each kind, procured for that especial purpose. Specimens of school furniture, with their prices, can be seen at the Educational Department, Toronto.

For the arrangement of furniture no specific directions can be given which will meet all cases. Most houses and schools will require certain modifications to suit local or peculiar circumstances. Here again, the experienced judicious teacher will be found to be the safest adviser.

There are, however, certain general principles both of construction and arrangement, governing this subject, which should never be violated. These will be indicated in their proper place; leaving details to the circumstances of each case.

The accommodations for a school-house, embraced under the head of furniture, may be divided into three classes. 1. Those relating to the general care of the building, which chiefly have their place in the entry and clothes-rooms. 2. Those connected with the purposes of the principal school-room. 3d. Those of the gallery or class-rooms.

I. ENTRY AND CLOTHES ROOM FURNITURE.

The Scraper.—The space immediately in front of every school-house should be paved with brick or stone, covered with plank, or the surface, by some other appropriate means, rendered smooth and so hard as to resist the action of the rain and frost. On this space the steps or platform leading to the door will be placed, and either will be incomplete without a strong, convenient shoe-scraper at each side. Two will be required, for the reason that the pupils enter the school, morning and afternoon, about the same time, and if there be only one scraper, it will either cause delay or compel some to enter the building with soiled shoes. Cleanliness and neatness are amongst the cardinal virtues of the school-room; and every means of inculcating and promoting them should receive the earliest and most constant attention.

The Mat.—After the rougher and heavier portion of the mud has been scraped from the feet, a good rubbing on a coarse mat will not only remove the balance, but aid in drying the shoes, so that there will be less danger from wet and damp feet than would be experienced without this preoaution. In addition to this, there will thus be less of that annoying dust in the school-room, which, when present in large quantities, is constantly kept afloat in the air, to the great discomfort of the inmates and to the injury of clothes, books and lungs. A pair of mats, or two pair in a large School, to be used alternately—one to be dried and beaten free of dust while the other is in use—may be made of corn-husks or straw. If the teacher manage properly, mats, quite sufficient for the purpose, will be readily made or provided by the larger pupils in turn, if they can be had in no other way. These rough mats should be placed just inside the main entrance door; and if the female pupils were to prepare a rag mat to be laid inside of or near the door leading from the entry or vestibule into the school room, for a second wiping of the feet, the precautions against dust in the room would be complete. The use of the scraper and mat should in all cases be insisted on, and every pupil entering with soiled feet should be sent back and made to clean them.

The Wash-basin.—Children often soil their hands in play, and some even come to school with unwashed hands and faces and uncombed hair. Such should never be permitted to enter the school-room, till all the requirements of outward decency are complied with. In the country it will generally be too far to send them home again for that purpose; and therefore preparation for it should be found in the school. Hence, a tin basin on a shelf in the corner of the entry of a small school, a wash-stand in a larger building, or a regular wash-closet in one of the highest class, becomes proper. Soap and towels

will also be indispensable; and if not provided by the section, they should be by the pupils, for whose use and benefit they are alone needed.

Buckets.—Every school should have two buckets—one for drinking fater with cup near it, and one for washing and scrubbing purposes.

Broom and Brushes.—No school however small or plain, should be without a broom for sweeping the floor at least twice a week, and if daily, the better. Large buildings should also have a hair sweeping or floor brush, and a cobweb brush or ceiling duster with a long handle. To this list should also be added a scrubbing brush for the floor and a white-wash brush for the walls; and the more they are all used, the better for the health and habits of the pupils.

Umbrella Stand.—In wet weather the entry, or the corners of the school-room, are often flooded with the drippings of Umbrellas. The one-half of a water tight barrel placed in one corner of the entry, would receive the umbrellas of the whole school, and prevent this annoyance. In the larger schools something more complete should be found. A water-tight trough one foot wide and one foot deep, and two, three or four feet long, according to circumstances, painted inside and out, with four legs a foot high, and a guard or slat around it about one foot above the top edge for the umbrellas to lean against, would be a neat article of furniture, cost but little, and contain a large number of umbrellas. There should also be a hole in the bottom of it, with a cork, to run off the collected water into a bucket.

Fire-irons.—If the school is heated by means of a wood stove, a pair of tongs and a fire shovel, with an ash-bucket or pan, will be indispensable. If coal is used, a pair of tongs will also be necessary, with a small shovel and a poker, a coal scuttle and a sieve for the cinders. In both cases an axe and a saw to cut the wood or the kindling, will also be needed.

Clothes Hooks.—In all new school-houses enough of these to allow one for each pupil, should be embraced in the contract for building. In old houses they should be at once put up. One should be assigned to each pupil and numbered, and each should be required to use his or her own, as in the Model School, Toronto. There is a very cheap kind of cast iron hooks, which are rarely worth the trouble of fastening to the wall. They break off with the slightest degree of strain.

The better kind should be procured, or wooden pins, well slanted upwards, should be used.

Dinner Closet.—In the country many pupils, living at a distance, necessarily bring their dinners with them, and require a safe and fit place for it, during the forenoon. A closet, with a lock and key, should be placed in the entry or clothes room for this purpose. When this is done, the closet should be locked by one of the pupils appointed for that purpose, after all are in. Thus the baskets will be properly and safely kept, and the untidy practice of having them standing under the desks or along the walls in the school-room, avoided. This will also prevent those liberties being taken with the dinner baskets by mischievous pupils while passing in and out during school hours, which often create disturbance, when the baskets are left in the clothes rooms without being locked up.

Mode of Obtaining these Articles.—Several of the articles just named are indispensable and will not be refused by any Board of Trustees. Others may be. In that case it will be in the power of the teacher, by showing a disposition to keep the school-house in good order and condition, and by a respectful representation of the utility and necessity of additional articles, to induce a reasonable Board to allow them. If not, he has the pupils to appeal to. By proper explanation of the uses and value of the desired conveniences, and of the habits dependent on them, he will rarely fail in creating such a feeling in the school as will supply all that is reqnisite, till the Trustees shall discover their own duty in the matter.

MODE OF USING THESE ARTICLES.—Most of them, such as scrapers, mats, basins, buckets, fire-irons, clothes-hooks and dinner closets, are in daily use, and only require a little constant attention on the part of the Teacher, to render them greatly conducive to the neatness and good condition of the school, and of the formation of right habits. But others, such as brooms, sweeping brushes, scrubbing and cob-wed brnshes, and above all white-wash brushes, only come into use occasionally, and will require an effort on the part of the teacher to develop their full use and value. But this effort, if properly made, will be its own reward. If the larger pupils be requested to meet the teacher in the school-house during a Saturday forenoon once a month, or even every six weeks, for a general sweeping, scrubbing, and, if necessary, white-washing, the effect on the school—both personal and material—will be found most salutary, and the object will be accomplished. Children like to feel themselves of use to those whom they respect, and, if properly governed, they delight in improving their own things. The teacher is their best friend and the school is their own. Their nature will incline them, if it be properly guided, to oblige the one and beautify the other.

In addition to this thorough cleansing, there should be a general arrangement of the books, apparatus, furniture, &c., of the school-room every Friday afternoon, before dismissal for the week.

II.—SCHOOL-ROOM FURNITURE.

SEATS AND DESKS.—These constitute the main portion of the furniture of the room, and upon their form, construction and arrangement, will depend much of the comfort of the pupils and the order of the school.

Certain conclusions have been arrived at with reference to seats and desks, by the experience of well conducted schools, which may now be admitted as settled principles applicable to all schools. These are: 1. That every pupil, whether old or young, should have a desk as well as a seat; 2. That both should be made as comfortable and as well adapted to their object as possible; That the seats and desks should be so arranged as to permit each pupil to pass to and fro from his own, without disturbing any other in so doing. To these may be added: 4. That the more neatly and substantially the seats and desks are made at first, the longer they will last, and the greater will be the saving to the district in the end.

The desk is as necessary for young as for older pupils, for several reasons. Children should not be long confined to one attitude—frequent change of position seeming to be a want of their nature. After sitting upright in their seats for some time, they soon lean on the back of the chair or bench; but this posture before long also becomes tire some, and they will be observed to lean sideways upon each other. At this time it is that restlessness and disorder begin to manifest themselves amongst the younger pupils, and at this time the forward support afforded by the desk, both for the person and the book, would form a relief to the scholars and tend to the quiet of the School. Moreover, it is now admitted by all good teachers that the slate and pencil should be put into the hands of every pupil the very first day of his entrance into School; and this renders a desk indispensable, if for no other reason.

To render the seat and desk comfortable and convenient, both should bear a proper proportion in height and form, to the size of the pupil; so that when seated, his feet should rest firmly on the floor, and his arms should have easy action on the desk, without either raising them above the proper level for free use, or compelling him to stoop so as improperly to bend the body and contract the chest. The seat should in all cases have a comfortable back, and be slightly higher before than behind, so as to give a firm position to the person upon it. The desk, being designed to retain the books or slate without the necessity of holding them upon it with the hand to prevent them from sliding off, should

be very slightly inclined from front to rear, with a level space at the extreme rear for pencils, pens, &c.

It needs no argument to show that every pupil should have free access to his own seat. This is generally admitted with regard to the older scholars; but it is equally if not more requisite, in the case of the younger, who are more uneasy and require to leave their places more frequently. This object can only be effected by the use of single or at most double desks—that is desks at which no more than two pupils sit. The former would be the more desirable in all cases; but as they occupy too much floor space, when arranged with a passage at each end, the double desk is now in use in all, except the highest grade of schools.

Seats and Desks for Primary Pupils.—Various kinds are now in use for this class of pupils; all seeking to unite comfort with neatness and durability. The combined seat and desk represented by Fig. I., seems to comprise all these requisites. The legs or staunchions are of cast iron and the remainder of wood. The seat of one pair of

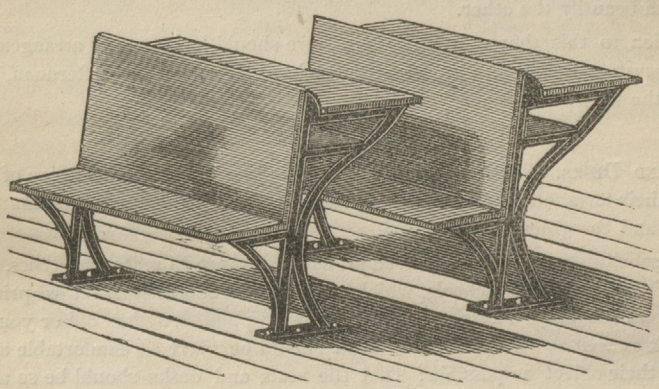
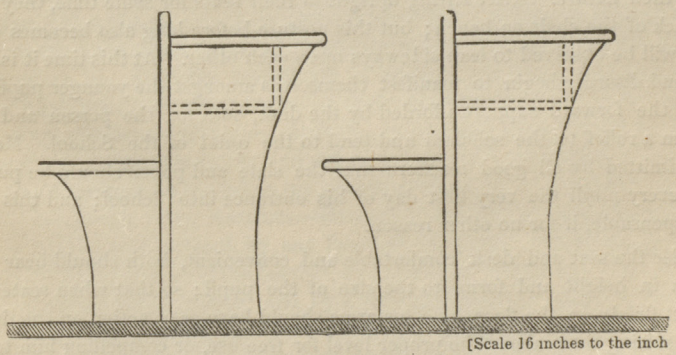


FIG. 1.

pupils is connected with the desk of the pair behind them, but the whole being firmly secured to the floor, will not be liable to shake, so as to cause disturbance to either. Properly constructed and handsomely painted, this would form a neat as well as comfortable article of furniture.

We next present two engravings of seats and desks of a similar construction. It



[Scale 16 inches to the inch

FIG. 2.—SECTION OF SCHOLARS' DESKS AND SEATS.

will be seen that the upper surface of the desk in Fig. 2 is level; and that of Fig. 3 is sloped, except about three inches of the most distant, being the ratio of one inch in a foot. The edges of the seats are in a perpendicular line with the front of the seats.

Each pupil should be provided with a seat and desk properly adapted to each other, as to height and distance, the front of the latter constituting the back or support of the former—as shown in Fig. 3. The desk should slope about $2\frac{1}{2}$ inches in 16, as indicated

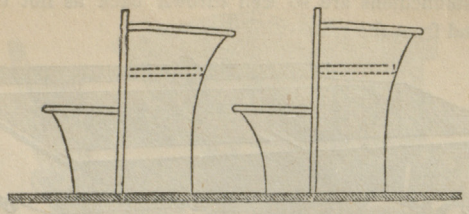


FIG. 3.—SECTION OF SEAT AND DESK.

in the same Figure. The seats should vary in height from $9\frac{1}{2}$ inches to 17 inches, for children of different sizes and ages—the youngest occupying the seats nearest the platform. The seat should be so made, that the feet of every child, when properly seated, can rest on the floor, and the upper and lower part of the leg form a right angle at the knee; and the back of the seat, whether separated from or forming part of the adjoining desk behind, should recline to correspond with the natural curves of the spine and the shoulders. The seat should be made as far as possible like a convenient chair.

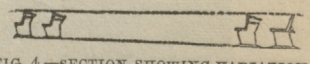


FIG. 4.—SECTION SHOWING VARIATION IN HEIGHT.

GRAMMAR SCHOOL SEATS AND DESKS.—Though the double seat in connection with the double desk, is yet used in some schools of the highest grade, yet the inclination is general in favor of the single seat. The one now presented, Fig. 5, seems to be desirable

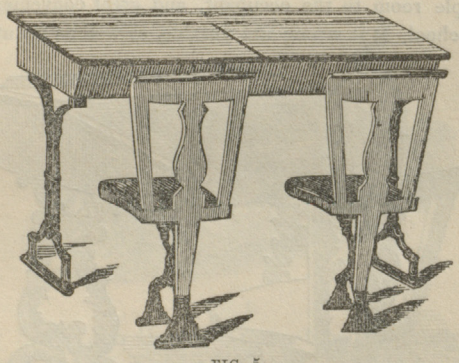


FIG. 5.

in every respect, except that the chair does not revolve; some teachers preferring the stationary or unrevolving seat. It shows a seat and desk differing much in form yet the same in principle as the last, except that the desk has an enclosed box covered with a hinged lid, for each pupil. Some teachers prefer this arrangement, but the majority do not favor it, as the raising of the lid interposes a screen between the teacher and pupil, behind which acts may be performed which would not be openly attempted; while the opening and shutting of the lids cannot but create noise. The desk with a stationary lid, a shelf beneath, and a slit in the back for a slate, seems to meet the views of the greater nnmber of teachers.

In connection with either of these Grammar School desks, a revolving chair, one of which is shown further on, may be used; and if properly constructed, it will be found easy and pleasant.

The furniture for the best Grammar School will necessarily be larger, and generally of

a more elaborate style and bet ter finish than that of the lower grades. Whenever floor space will allow, none but single seats and desks should be used; but if the double kind is adopted, Fig. 6 represents a beautiful and appropriate form. The desk is large and capacious, and its staunchions are so well thrown back as not to interfere with the knee in passing to and from the seat.

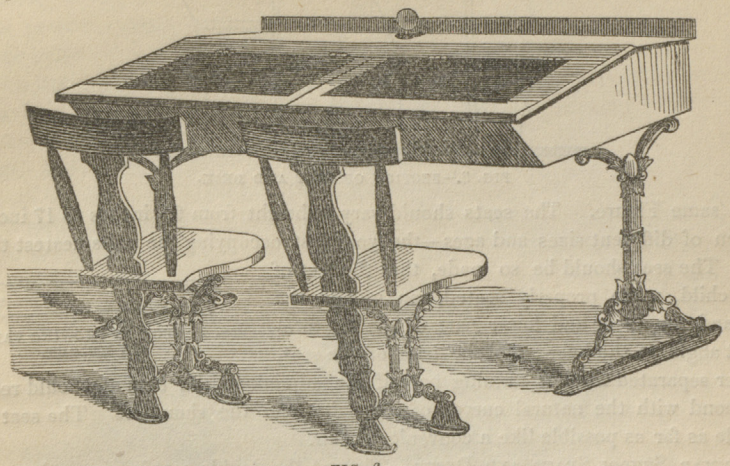


FIG. 6.

The single seat and desk shown by Fig 7, is of similar style, and intended for the same grade of school as the last. It has a lid or fall to the desk, a stationary seat, and seems to afford ample room to the occupant, and great convenience for study and the other duties of the school. It is strong and durable, as well as beautiful in appearance.

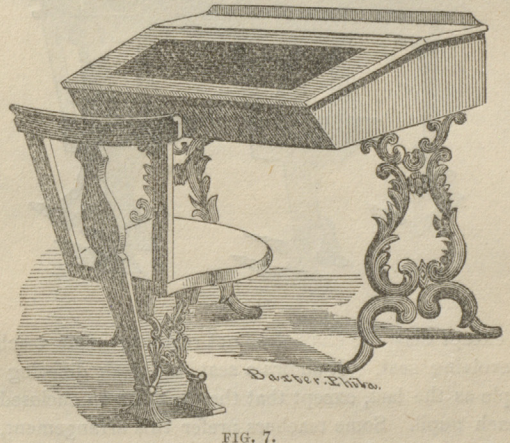


FIG. 7.

The desk in Fig. 8 has no lid, but an open shelf below for books, with a slit in the back part for the slate. Both the stanchions of the desk and the base of the chair are of east iron, screwed to the floor. The box forming the desk is attached to the stanchions by the four light bolts, passing from the top of the box through the heads of the stanchions, and secured by a nut and screw from beneath; the head of the bolt being let into the desk top and covered with putty before painting. The seat and back of the chair are precisely those of the common Windsor chair, which the pupil uses at home. On the bottom of the seat, a pivot of wrought iron three quarters of an inch in diameter

by three inches in length, inserted in a cast iron plate four inches square and three-eighths of an inch thick, is fastened by means of four one-inch screws. This pivot plays into a corresponding socket in the head of a cast iron base; the top of the base being

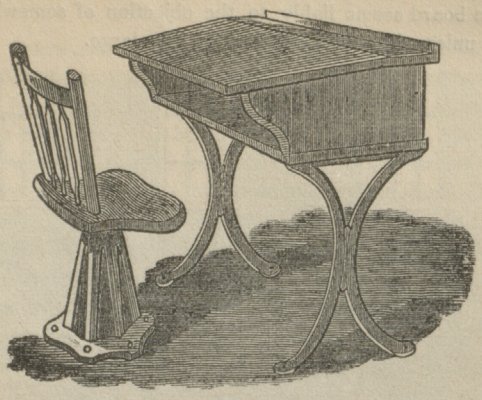


FIG. 8.

slightly rounded, or convex, to allow a small degree of rocking motion and make the chair revolve easily. A piece of leather is put on the pivot to prevent noise in revolving. The chair is not fastened to the base, but may be lifted off when the room is to be swept or scrubbed. [See Fig. 9:] Desk stanchions and chair bases of four different heights, each in succession one inch higher than the other, are made to suit the different sizes of the pupils.

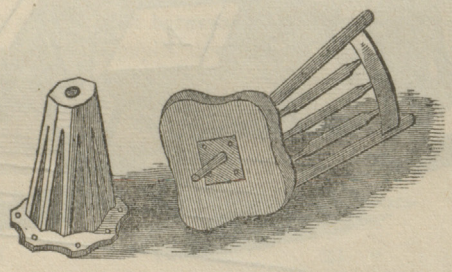


FIG. 9.

ARRANGEMENT OF SEATS AND DESKS.—It has been frequently suggested that, in arranging the furniture of a school-room, the pupils should be faced towards a wall containing no windows, or, if any, that they should have close blinds or curtains; and that if possible this should be the north wall. It is also believed that the teacher's platform and desk should be across the end and not the side of the room; thus throwing the whole of the pupils more in front of him.

In all schools, but especially in those of mixed studies and ages, there should be seats and desks of different heights to suit the respective sizes of the pupils. In such cases the smaller seats for the younger pupils should be placed in front,—that is nearest the teacher's desk,—in order to have them more under his eye and control.

Seats and desks should never be allowed to touch the wall. If the size of the room will not allow a full passage next the wall, the desk should be kept at least six inches from it, both to allow the pupil near it the free use of his arm, and to keep him from contact with the damp, cold wall.

The following plate represents a new mode of arranging seats and desks, intended to

save floor space without the use of the double desk. If found satisfactory in other respects, it will have the additional advantage of allowing more room for passages, and particularly for a wide middle passage, and for outside passages along the walls. The dividing or partition board seems liable to the objection of somewhat interfering with the arm in writing, unless the top of the desk be very large.



FIG. 10.—INTERIOR SEATING OF A SCHOOL-HOUSE.

Explanation:—A. A. First rows of desks; B. B. Corresponding seats: C. C. Second rows of desks D. D. Separate partitions; E. Teacher's desk; *a. a.* Cast-iron desk standards.

The engraving on page —, represents the plan so plainly, that verylittle more is required to be said respecting it.

By this new arrangement two rows of desks are combined together, with a separating partition between them; or, with a standard at each end, the partition may be dispensed with. Two rows of desks, *A A* and *C C*, are shown, cennected to each partition board, *D*. The teacher's desk is reprcsented at *E*; *B* are the seats of the scholars at the desks; *a a* are the desk standards. Each scholar's desk is arranged opposite the seat space of the opposite scholar, thus separating them, and preventing playing and whispering.

By this arrangement as many scholars can be seated at single as at double desks, and they will only occupy the same floor room. There is also a gain over single desks as arranged in the common way in schools, by seating forty-eight scholars, with these desks, in the same space as thirty-six are commonly seated. The desks and chairs are arranged diagonally on the floor, so that no one scholar can see the face of another without one of

the two being at right or left half face. When the school is called to procession, all can rise at once, and step into files in the aisles, without coming in contact with one another. Scholars are more directly under view of the teacher, and can therefore be kept in better order.

RELATIVE SIZES OF SEATS AND DESKS.—The desks and seats for pupils should be of different dimensions. We think it most desirable for two to sit together; and each desk for two may be 3½ or 4 feet long. The younger pupils being placed nearest the master's desk, the front ranges of desks may be 13 inches wide, the next 14, the next 15, and the most remote 16 inches, with the height, respectively of 24, 25, 26 and 27 inches. The seats should vary in like manner—those of the smallest class should be 10½, the third 11, the fourth or largest class 11½ or 12 inches wide; and being, in height, 13, 14, 15 and 16 inches respectively. All the edges and corners should be carefully rounded.

The desk for a single pupil should be, at least, two feet long (2½ is better) by 18 inches wide, with a shelf beneath—as indicated by the dotted lines in Fig. 3—for books, and a narrow deep opening between the back of the seat in front of the desk itself to receive a slate—as at *b* in Fig. 10. The upper surface of the desk, except three inches of the part nearest the seat in front, should slope one inch in a foot, and the edge should be in the same perpendicular line with the front of the seat. The three inches of the level portion of the surface of the desk should have a groove running along the line of the slope, *a*, Fig. 11, to prevent pencils and pens from rolling off, and an opening at *c*, (same Fig.) to receive an ink-stand, which should be covered with a metalic lid. The end pieces or supporters of the desk should be so made as to interfere as little as possible with sweeping.

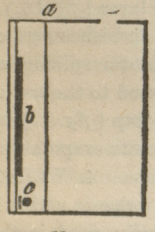
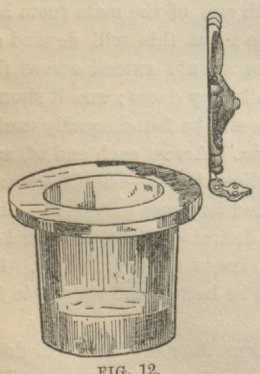


FIG. 11.—TOP OF DESK.

The following table is said to show pretty accurately the proportion which should exist between the heights of seats and desks for the various sizes of pupils; the corresponding width and length of the desks; and the proper distances between desks of the same size in the same row, so asto admit the chair between them.

Height of seat.	Height of front of desk.	Width of desk.	Length of desk per pupil.	Chair space between desks.
10 inches.	21 inches.	12 inches.	17 inches.	20 inches.
12 "	23 "	13 "	19 "	22 "
14 "	25 "	14 "	21 "	24 "
16 "	27 "	15 "	21 "	26 "

THE INK-WELL.—The ink-stand or well is an indispensable accompaniment of the desk, and, if not of a proper form or properly secured, often gives much trouble. A loose ink-stand or bottle on a small desk, the greater part of whose lid is considerably inclined, is liable to be upset or thrown off. A wide-mouthed glass cup with a rim to it, and let into the corner of the desk, is secured from falling or upsetting, but receives the dust of the room to the injury of the ink. Hence one let into the desk, with a hinged lid or cover, so arranged as to exclude the dust and yet not to be in the way of books, slates, &c., when closed, seems to be the best and cheapest expedient that can be adopted. Many wells have been prepared for these purposes. Fig. 11 in the margin will serve to convey the idea, with without further explanation.


FIG. 12.

Another kind of ink-bottle is given in the following figures, 13, 14, 15, and 16:

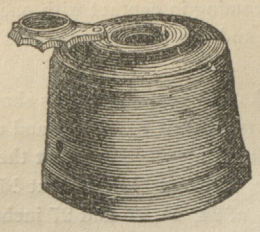


Fig. 13.

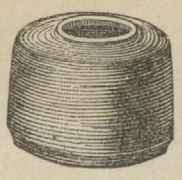


Fig. 14.

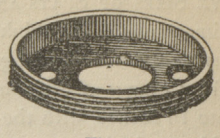


Fig. 15.

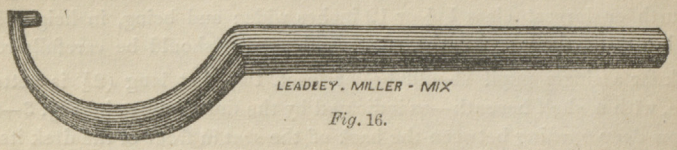


Fig. 16.

Explanation.—The malleable iron-plate (*fig.* 15), with a screw-thread on its rim, is held securely to the desk or table by two common screws. On this is placed the glass cup (*fig.* 14) to contain the ink. The cap (*fig.* 13) of Japanned iron, surrounds the glass cup, and is screwed on to the base-plate, or removed at pleasure, by the lever (*fig* 16.)

This ink-stand is said to combine the following excellencies: 1. It furnishes perfect security against injury to books and furniture, occasioned by the accidental spilling or careless use of ink. 2. In the school-room, it places the ink appropriated to the use of the pupils wholly within the control of the teacher—the removal of the cap (*fig.* 12) by ordinary means being impossible. 3. It protects the ink from dust, prevents evaporation, and affords better security against freezing than any other inkstand in use. 4. While it combines beauty of design with the highest degree of durability, the price at which it can be afforded is but little in advance of the cost of ink-stands ordinarily used in the school-room. It is asserted by experienced teachers, that the amount saved in the prevention of injury and waste, will pay for its introduction in a single term. These, and other school ink-stands, are for sale at the Educational Depository, Toronto.

Class-Space.—In a school-house without recitation rooms, or with but one teacher, a sufficient space in front of the platform, for classes during recitation, will be indispensable. It should be as large as possible, after making full allowance for the necessary passages. The full breadth of the room should be allowed for this purpose, if practicable; if not, space for painted or brass semi-circles at the side rows of seats should be allowed.

Platform.—In all contracts for the erection of school-houses, the platform should be included, and it should be ample and substantial. The north end of the main room has frequently been pointed out of the most desirable situation; but this will depend on the position as the house and of the windows. The platform should extend across the whole end or side of the room where it is placed, if not curtailed by doors; and it should be one full step higher than the floor, but probably two steps will be found equally useful for ordinary purposes, and more so in times of exhibition, &c. Across each end of, and upon the platform, will be an appropriate place for two standing closets—one for apparatus, and the other for a library, if no room be specially provided for those purposes. This part of the wall, as it does not face the school, will not be so desirable for a black-board as the cross wall, and can more readily be dispensed with for closets than any other. No platform should be narrower than four feet, but five would be better, and six ample for all purposes.

Teacher's Desk.—Many forms of teachers' desks are in use. Any of them will do if it have the following qualities: 1. A large, level, table-like surface on the top, not less

than two and a half feet wide by five feet long, with a ledge not higher than two or three inches at each end of the back, and a moveable inclined surface for writing on, if desired. If the ledge is higher, it will interfere with the teacher's view of a class in front of him, and may impede the pupils' view of articles or experiments when exhibited on the desk; and the inclined writing surface should be moveable, to leave the whole desk-top free for similar occasions. 2. It should have no deep box, covered with a lid, but side drawers or shelves with doors, or both, always accessible without disturbing the articles necessarily placed on the top.

Teacher's Chair.—The platform should have at least one large, comfortable, and sedate looking chair; not that the chair, or the desk, or any other part of the school-room furniture or apparatus, will supply any defect in the teacher; but every proper means should be adopted to add to the respectability of his position and the dignity of his office. The platform should also have a half-dozen other chairs for visitors, and particularly for the Board of Trustees, who, when they visit the school, should always, during at least a portion of their stay, appear on the platform, and be seen and known in their official character. Children are naturally inclined to be much influenced by the presence of those in authority; and it is a great error in any system for the education of a people, whose laws and the agents of whose laws depend wholly on voluntary obedience, to weaken—or rather not to strengthen—this right feeling. This salutary habit of respect for the law and its officers, will not only be strengthened by the official reception and presence of School Trustees, but the teacher will find his heart cheered and his hands strengthened by their frequency. When it is known that this is a matter of periodical recurrence, it will be expected and prepared for; and when the rules of the school are understood to emanate from other authority, and their results to be reported to another tribunal, parents will have an additional motive for conformity, and pupils one more strong stimulant to progress.

Black-Board.—By all competent teachers, the black-board is now known to be the most useful, and, next to seats and desks, the most indispensable article of school furniture. With a sufficiency of black board, the well-qualified, experienced teacher can do almost anything in the way of instruction; without it, he feels himself at a loss in every branch.

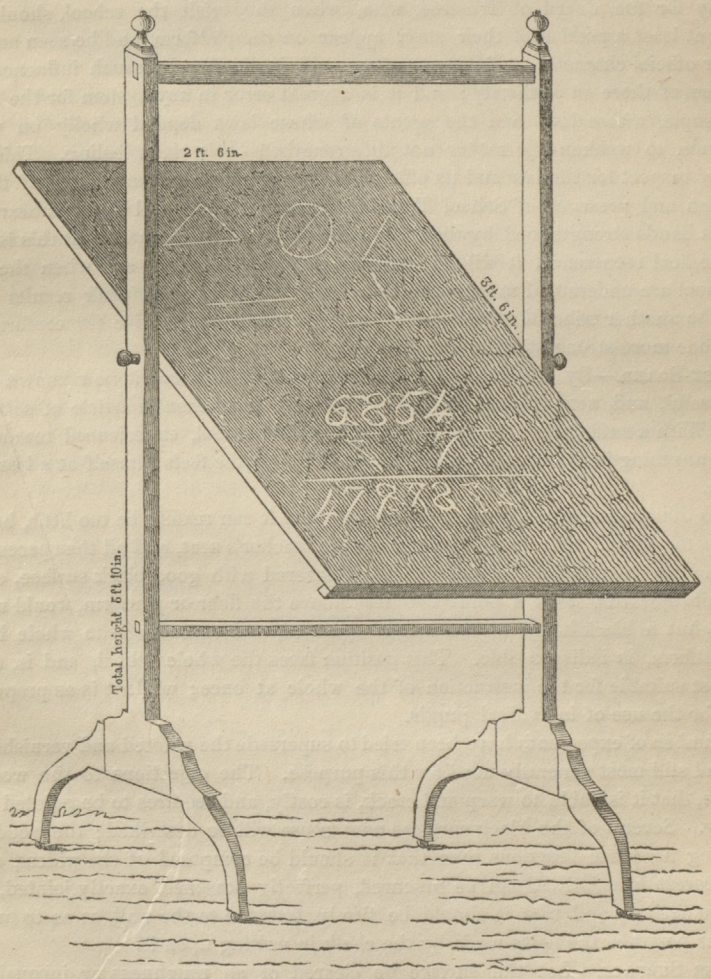
As to the quantity requisite, it may be said that it can readily be too little, but cannot well be too great. The whole wall behind the teacher's seat, and all the spaces between the windows and doors on the other walls, if covered with good black surface, extending five feet upwards, from a point two feet above the floor or platform, would not be too much; but a black board of the height specified, and extending the whole length of the platform, is indispensable. This position faces the whole school, and is, therefore, the most suitable for the instruction of the whole at once; while it is as proper as any other for the use of individual pupils.

A number of expedients have been tried to supersede the painted and varnished board, first and still most generally used for this purpose. The objections to the wooden surface are, that it is liable to warp and crack, is costly, and requires to be painted very frequently. Several of the black surfaces now in use will be described; the wooden board requiring no other directions than that it should be composed of the widest, soundest, and clearest boards that can be procured, perfectly seasoned, exactly jointed, and well glued to gether; and that it should be firmly fastened to the wall, so as to prevent, as much as possible, the noise made by the chalk in writing upon it.

Paper Surface.—Let the surface be cleared of all roughness or inequality, with sand paper. Take common wall paper, let it be pasted smoothly and firmly on the required spaces, and covered according to the following recipe:—"Lamp-black and flour of emery, mixed with spirit varnish. No more lamp-black and flour of emery should be

used than are sufficient to give the required black and abrading surface; and the varnish should contain only sufficient gum to hold the ingredients together, and confine the composition to the wall. The thinner the mixture the better. The lamp-black should first be ground with a small quantity of alcohol, to free it from lumps. The composition should be applied to the smooth surface with a common painter's brush. Let it become thoroughly dry and hard before it is used." This kind of surface, if properly made and used, will last for several years.

Another paper surface may be speedily and cheaply prepared, by pasting strong wall paper smoothly on the wall, then sizing it to prevent the paint from sinking into the paper, and afterwards giving it a couple of coats of black oil-paint, with a small mixture of emery to give it a grit, or hold on the crayon, and enough varnish to cause it to dry rapidly.



THE BLACK-BOARD.

Composition Black-Board.—For twenty square yards of wall, take three pecks of mason's putty (white finish), three pecks of clean fine sand, three pecks of ground plaster,

and three pounds of lamp-black, mixed wth three gallons of alcohol. Lay the mixture evenly and smoothly on the surface to be covered. *Note.*—The alcohol and the lamp-black must be well mixed together, before they are mixed with the other ingredients.

Another: To 100 lbs. of common mortar, add 25 lbs. of calcined plaster; to this add twelve papers, of the largest size, of lamp-black. This is to be put on as a skim coat, one-sixth of an inch thick on rough plastering, after it has been thoroughly raked and prepared. This should be covered with a coat of paint, made in the following manner: To one quart of spirits, add one gill of boiled oil; to this add one of the largest papers of lamp-black, after it has been thoroughly mixed with spirits. To this add one pound of the finest flour of emery. This paint may be also put on boards or canvas. This should be constantly stirred when used, to prevent the emery from settling. If too much oil, or if any varnish be used, the board will become more or less glazed, and unfit for use. Some prefer to have the board behind the teacher green or bronze, which is more grateful to the eye. This can be done by using chrome green instead of lamp-black. None but the very finest flour of emery should be used. Some prefer pulverized pumice-stone to emery.

Groombridge's substitute for a black-board, which may be procured at the Educational Department, Toronto, of the following sizes and prices, is made of canvas, painted black, with wooden frames:—No. 1, Size 24 inches by 36 inches, $1 50c.; No. 2, 30 inches by 36 inches, $1 88c.; No. 3, 30 inches by 42 inches, $2 10c.

All stationary black-boards should have a neat frame or moulding at the top and each end, and a ledge or narrow trough at the bottom, to hold the chalk or crayons and the wipers, and to catch the dust from above. This should be so made as to prevent the crayons from rolling off and breaking on the floor.

Moveable Black Boards.—These have the advantage of presenting both sides for use. One kind is set in a frame, and turns on pivots, as shown in the previous engraving. Another and a cheaper kind rests on a stand, something like a painter's easel. It is supported by pins, which can be raised or lowered at pleasure—both sides being also prepared for use.

Chalk and Crayons.—Chalk is the substance most generally used for writing with on the black-board; but it is so often gritty and liable to scratch the board, that prepared crayons, when obtainable, are much better. The following recipe is said to produce excellent articles, at a small cost; and if one person were to make them for a whole district, the cost and the labor would both be further reduced. Crayons thus made will not cut or scratch the board, but they are easily broken, and require more care than chalk.

To Make Crayons.—Take five pounds Paris White and one pound of Wheat flour, wet with water, knead it well, make it so stiff that it will not stick to the table, but not so stiff as to crumble and fall to pieces when it is rolled under the hand.

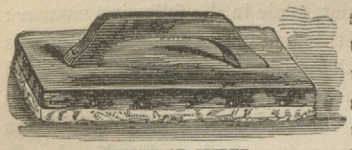
To roll out the Crayons to the proper size, two boards are needed, one to roll them on; the other to roll them with. The first should be a smooth pine board, three feet long and nine inches wide. The other also should be pine, a foot long and nine inches wide, having nailed on the under side, near each end, a slip of wood one-third of an inch thick, in order to raise it so much above the under board, as that the Crayon, when brought to its proper size, may lie between the boards without being flattened.

The mass is rolled into a ball, and slices are cut from one side of it about one-third of an inch thick; these slices are again cut into strips about four inches long, and one third of an inch wide, and rolled separately between these boards until smooth and round.

Near at hand should be another board, three feet long and four inches wide, across which each Crayon, as it is made, should be laid, so that the ends may project on each side;—the Crayons should be laid in close contact and straight. When the board is

filled, the ends should be trimmed off, so as to make the Crayons as long as the width of the board. It is then laid in the sun, if in hot weather, or if in winter, near a stove or fire place where the Crayons may dry gradually, which will require twelve hours. When thoroughly dry they are fit for use. Crayons can also be procured at the Educational Depository, Toronto.

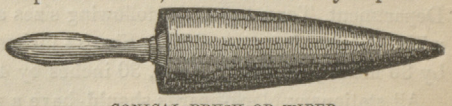
BLACK-BOARD BRUSH OR WIPER.—To save time and promote cleanliness, every pupil should, when at the board, be provided with a wiper, to clean the board and prevent as much as possible the dust from flying through the room. A common sized sheep's pelt would afford a sufficient number of the kind represented in the cut, for an ordinary school.



BRUSH OR WIPER.

The skin should be cut in pieces eight inches long and five wide, and be carefully tacked, woolly side out, on a block a little smaller in size. If the block is two or two and a half inches thick, it can be trimmed up so as to form a handle out of the same piece. These wipers will last a long time, and if properly made and used, will not cut or scratch the boards or wall.

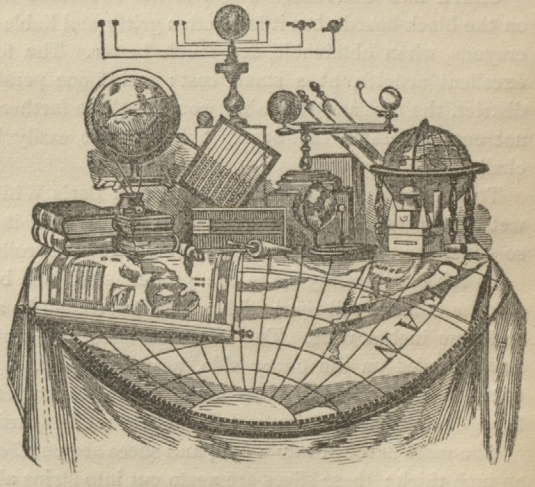
The Conical Brush or Wiper is a very superior article, and is sufficiently explained by the engraving. A wiper of some kind should be provided, and its use insisted on in every school. The filthy practice of using the edge of the hand, or the cuff of the coat for this purpose, should never be tolerated.



CONICAL BRUSH OR WIPER.

VI. ON SCHOOL APPARATUS, WITH DIRECTIONS FOR ITS SELECTION, USE, AND PRESERVATION.*

The utility and importance of the use of apparatus in the school-room, have not, until lately, been generally appreciated, as there are so many school sections in which nothing of the kind can be found.



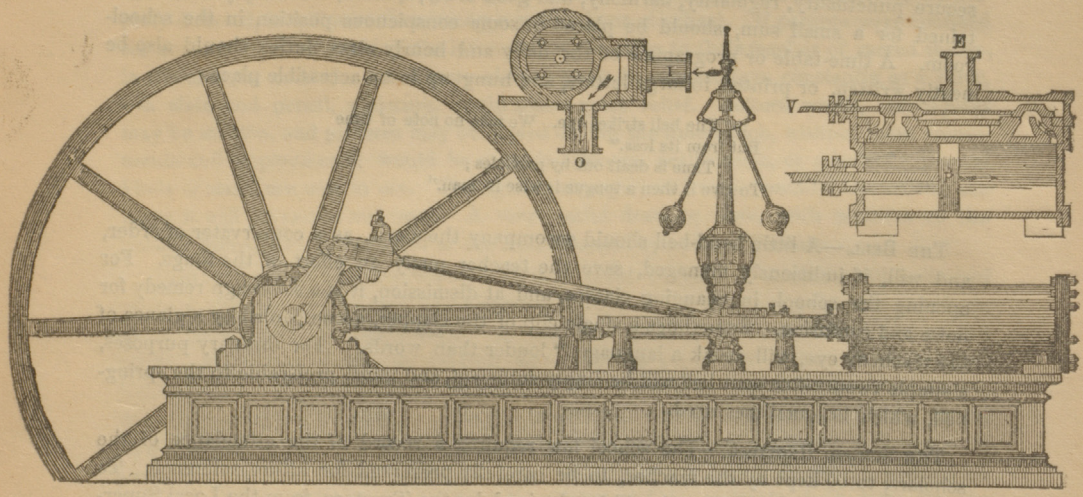
It is now conceded by every one, that we can best understand those things which we can see and handle, as well as talk about. It is the habit of mankind to be better satisfied with a knowledge of those things the eye has witnessed, than with the knowledge of the same things of which they have only heard. "We have seen, and therefore we know," is the general sentiment. It is true that much of our knowledge of material things, of facts and of principles, is not the result of our own observation or experiment; much that we know is received and appropriated upon the faith we have in others, in connection with our own knowledge of facts and

* This chapter, with some modification, is taken from Mr. Gow's paper, published in the Pennsylvania School Architecture. Most of the articles mentioned may be obtained at the Educational Depository, Toronto. See descriptive catalogue sent to Trustees and Local Superintendents.

principles; but he is not well educated who relies implicitly upon the statements of others, without some corroboration of his own judgment and experience. Scholars should think well and reason correctly—should form conclusions from established facts; and to do this, as much of their education as possible should be demonstrated or illustrated by practical appeals to their reason, through the media of the eye and the touch, as well as the sense of hearing.

Nor are the senses always able to convey the truth to the mind, although generally so reliable. We may deceive ourselves by relying too much on the appearances things may assume. Optical illusions or deceptions are not unfrequent, and hence the necessity of understanding things not only as they appear, but as they are.

The most enlightened and gifted teacher will frequently find that words are not sufficient to give a clear and distinct idea of subjects which are material and objects of sense. He must bring his subject, not abstractly, but really and practically, to the mind of the pupil, in order that it may be fully understood; and if he be not prepared to make his illustrations or experiments from the best sources and models, his ingenuity should be excited to present the best his means and opportunities will allow. The more that all the senses can be employed, the more information can be gained of



any subject. The wisest philosopher, endeavoring to explain the construction and operation of a steam engine, to one not well versed in mechanical science, would fail to convey any correct idea of the machine, unless assisted by diagrams, pictures, and models. Language alone would not be sufficient to present to the mind a clear conception of the complicated structure. Its various parts so nicely adjusted and well adapted to each other—its tremendous power and extreme velocity, could never be understood or appreciated unless it was thus seen and studied.

It is thus a question of great moment, how far material objects can be brought to assist in the improvement of the schools? Or, in other words, What tools can be put into the teacher's hands to enable him to do the most and best service, in the least time, and with the most economical expenditure of funds?

School apparatus may be enumerated under two classes. The first embraces those things which should be considered indispensable, and which no school should be without; the second contains such articles as may be considered exceedingly useful, though not absolutely essential, and also such as are most highly finished and expensive.

As the school law requires certain branches of science to be pursued in every section,

we would distinguish that apparatus as belonging to the first class, which is necessary to demonstrate, illustrate, or teach those branches, viz.: Geography, grammar, arithmetic, reading, writing, and spelling, and also to assist in the management of the school. The large majority of the schools would require a complete set of apparatus adapted to this end; and some might even go further, and secure some of the instruments enumerated in the second class.

Those embraced in the second class, would consist of such *materiel* as would be used in the teaching of any particular branch of science, other than those named in the school law, as natural philosophy, chemistry, physiology, &c.

In the first place, the first-class apparatus will be treated of, because much that it includes would be applicable to schools of the highest grade.

I. CLOCK—TIME-TABLE—BELL—REGISTER—THERMOMETER.

The Clock and Time Table.—The habit of correct observation cannot be cultivated in a better way than by a constant reference to time. In school this is particularly the case. Every day has its appointed duties, and every hour its special exercise. To secure punctuality, regularity, harmony, and good order, a clock, which may now be obtained for a small sum, should be placed in some conspicuous position in the school-room. A time-table or programme of the daily and hourly class duties should also be neatly written, or printed in large letters, and hung up in an accessible place.

"The bell strikes one. We take no note of time
But from its loss."
"Time is dealt out by particles;
To give it then a tongue is wise in man."

The Bell.—A little hand-bell should accompany the clock, as a conservator of order, and will, if judiciously managed, save the teacher many an effort of the lungs. For opening the school, in changing classes, and at dismission, it is a sovereign remedy for noise and confusion. Sometimes a single clip of the clapper, accompanied by a glance of the teacher's eye, will speak a language "louder than words." For ordinary purposes, a simple twenty-five cent bell will be amply sufficient, and much preferable to the spring-bell, which is sometimes used.

The School Register.—The school law requires a record of the attendance of the scholars, to be kept by the teacher, to be carefully preserved for future reference. To carry out the law, a register should be obtained by the Trustees, from the Local Superintendent, ruled according to the prescribed form. They should require it to be kept neatly and accurately, by the teacher, and presented regularly for inspection. A book of record of this kind, kept as contemplated, would exert a beneficial influence upon all connected with the school. To the trustees it would afford, at a glance, the comparative merits of one school with another, and of the present with the schools of the past. To the parent it would exhibit the attendance of the child, and its character. The pupil, knowing the permanence of the record, would strive to appear to the best advantage upon its pages. And lastly, the teacher could refer to it as one evidence of his neatness, regularity, and faithfulness.

The Thermometer.—To ascertain the degree of temperature in the school-room (always a consideration of importance), there should be at least one thermometer. By means of the ventilators, the teacher may regulate the temperature, and prevent those extremes of heat and cold so injurious to health and prejudicial to comfort. The temperature should, if possible, range between sixty and seventy degrees. Good school thermometers, in boxwood cases, can be obtained at the Educational Depository, Toronto.

Thus far we have treated of those things which are important to preserve order, punctuality, and comfort. We will now refer to the apparatus necessary for teaching the required elementary branches.

II. SLATE—TABLET AND OBJECT LESSONS—DRAWING, BLACKBOARD, &c.

Apparatus for the Little Ones.—It would be an easier task to select and use the apparatus of a college, than to make choice of those things suitable for the "little ones" of the school.

> "The earth was made so various, that the mind
> Of desultory man, studious of change
> And pleased with novelty, might be indulged."

The school-house should also be "made so various." If children be well taught in school, efforts must be made to satisfy their desire after novelty and variety. They must be interested; and to interest them, they must have constant employment.*

The Slate.—Every child old enough to attend school should be furnished with a small, neat, well bound slate. All children love to draw figures and make marks with the chalk or pencil. If the propensity which affords them so much amusement, be properly directed, it will save them many a weary hour at school. If parents were confined six hours a day, with but little intermission, listening to their teacher of sacred things, in the church: or if the father were obliged to sit for several days constantly as a juror, —a slate and pencil, a picture, would afford great relief. Letters, words, and figures may be written, and pictures may be copied during the time which, without these amusements and employments, would be spent in idleness, restlessness, or mischief. Several kinds of slates are now in use. The lighter, stronger, and more beautiful the article, the more it will be prized and used. A very useful drawing slate, with pictures on the outside frame, may be obtained at the Educational Depository, Toronto.

Tablet Lessons and Drawings.—To the great comfort of teachers and saving of primers, the pages of the first national reading-book in use has been printed in sheets, so as to be stretched on pasteboard. A class may recite from these with pleasure and profit. When not in use, the children may copy the words and letters on their slates. Cards, called "chalk drawings," to be used by children as copies at the black-board, are very useful and beautiful. They represent the object—a horse or a flower, as the case may be—on a black ground with white lines, so that they appear as if drawn with chalk on the black-board. The primary and secondary colors should be painted on cards, to teach children to distinguish colors, and to cultivate their taste for the beautiful.

Building Blocks.—For the purpose of illustrating the principle of gravitation, about one hundred blocks, each one inch thick, one inch wide, and two inches long, should be provided. Many practical arithmetical difficulties might be explained by reference to a construction by the blocks; but the chief excellence of such a set would consist in the amusement and employment it would afford the "little ones." While the teacher was busy teaching a class, they would be no less busy in quietly building those little houses.

Object Lessons may be taught in two ways, viz., by pictures of animals, scenes and phenomena, &c., and by cabinet objects. Indeed to complete the list of those things deemed indispensable for the use of the teacher and the benefit of the "little ones," there should be provided a strong box, to contain a cabinet, or *omnium gatherum*,

* The reader is referred to the suggestions on this subject contained in an article published in the *Journal of Education* for Upper Canada, July, 1857, page 107.

selected from everywhere—picked up in any place. Common-place things should there have a place. Whole volumes might be written on the simple texts there contained, which could be gathered in an hour; for, as Shakespeare says, there are "sermons in stones, and good in everything." For

> "Truths,
> That 'tis our shame and mis'ry not to learn,
> Shine by the side of every path we tread
> With such a lustre, he that runs may read."

This box should contain silk, muslin, flannel, linen, oil-cloth, felt, drugget, brick, pottery, china, glass, iron, steel, copper, lead, tin, brass, pewter, a type, a ring, a needle, a pin, a button, steel pen, paper, parchment, leather, morocco, kid, buckskin, cocoon, hair, wool, hemp, flax, wax, gum, bean, pea, clove, coffee, cinnamon, wheat, oats, barley, buckwheat, sponge, shells, &c. Such a box would contain a mine of truth to be had for the taking. Cabinets of this kind may be obtained at the Educational Depository, Toronto.

Much philosophy can be gathered from boys' toys. A top, a kite, a bat and ball, a marble, a bow and arrow,—all illustrate some principle or principles of mechanical law. An ingenious, thinking teacher will, if many of these things are not provided to his hand by those who ought to furnish them, make them himself rather than be without them. And besides these, any teacher can afford a syphon, a magnet, a prism, a lens, &c.

The Black-Board is the greatest time and labor-saving invention that can be introduced into the school. It may be put to an almost infinite degree of service, from the simple teaching of the alphabet, to the most abstruse problems in mathematics. Writing, spelling, punctuation, geographic diagrams, algebra, geometry, arithmetic, philosophical figures and drawing, may all be taught with this invaluable auxiliary. If the blacked surface be sufficiently large, a dozen, or twenty, or forty pupils if necessary, may be exercised at once, and the rapidity and accuracy with which such exercises may be performed, would perfectly astonish those who are not familiar with this mode of illustration and practice. No school-house should be without black-board accommodation for at least a dozen pupils. Twenty-four feet in length will accommodate that number, but more room would be better. A board should also be prepared for the special use of the teacher. The permanent black-board on the wall, with descriptions for preparing the various kinds of surface used for this purpose, and for crayons or chalk, wipers, etc., comes under the head of School Furniture. These have been fully treated of in the preceding chapter. The movable or frame black-board, however, would seem to come within the list of apparatus. The size should be about three and a half by six feet, and to facilitate moving, it should be set on large castors. When not in use it will occupy but little space at the side of the room. Upon the top cross-rail, neat hooks should be inserted, to hang maps, cards, etc., necessary for little pupils.—*See page* 83.

III. MAPS—DIAGRAMS—POINTERS—GLOBES—TELLURIAN—ORRERY, &c.

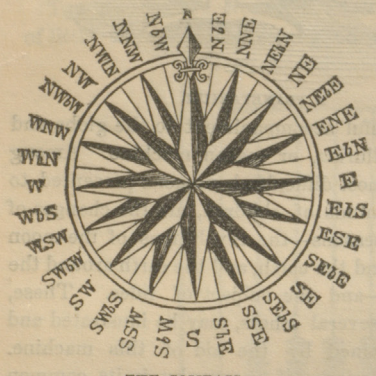
Maps.—A map is a picture of a part, or of the whole, of the earth's surface. From a study of such pictures the mind is enabled, by the principle of association, to transfer and secure a mental copy or impression from the canvas or plate.

Amongst the best maps for the school-room are Johnston's and the Irish National Series. Outline maps, or such as have no names on them, but merely an outline of the general characteristics of the country represented, are also very good. When properly instructed by means of these, children have no difficulty in carrying in the mind's eye the forms and features of the various countries, and the relative positions they occupy to each other and to their own.

There should not be less than ten maps in the set; comprising the eastern and western hemispheres, Canada, America, Europe, Asia, Africa, United States, the British Islands, &c.; and, if possible, a map of the county and township containing the school. These maps should also be well colored, and hung as objects of beauty and taste around the room. They can also be procured in cases and moveable stands, of very ingenious construction, as may be seen at the Educational Depository, Toronto. Whenever they are used in recitation, the case or stand should be removed to the north side of the house, so that the points of the compass on the map may correspond with their true position on the earth.

Diagrams of every variety, relating to natural philosophy, the physical sciences, &c., may be obtained at the Depository, Toronto. These illustrations give great interest to the subject to which they refer.

Pointers or Wands.—Several pointers should be furnished for use in the demonstration of problems on the board, and for pointing out places on the outline maps. They should be four or five feet long, neatly tapering to a point, and light.

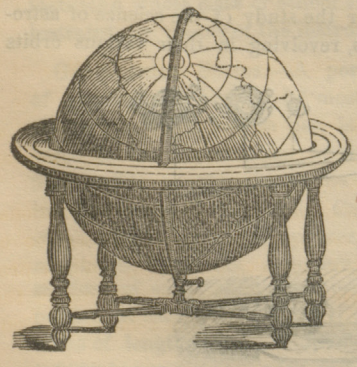


THE COMPASS.

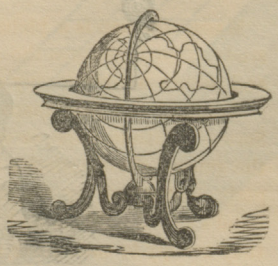
Cardinal Points.—To familiarize scholars with the principal points of the compass, North, South, East, and West should be neatly painted or printed, and put up on the corresponding walls of the school-house.

Globes.—It is a difficult thing for a scholar to appreciate the fact that the earth on which we live is globular, and that though it has a motion which tends to throw us from its surface, yet we cannot fall from it. Maps may, to some extent, be used for this purpose; but to convey the complete idea, a model is indispensable. That model is the terrestrial globe. Not unfrequently, the pupil, attempting to learn geography without this aid, has, and will always continue to have, a confused idea of equator, meridians, parallels, and poles; of latitudes, longitudes, axis, and zones. The whole is to him without system, and with little sense. On the contrary, these terms are easily taught, if suitable subjects for illustration be provided.

The celestial globe, or planetarium, will also much facilitate the conveyance of information as to the position and the motion of the heavenly bodies, and will

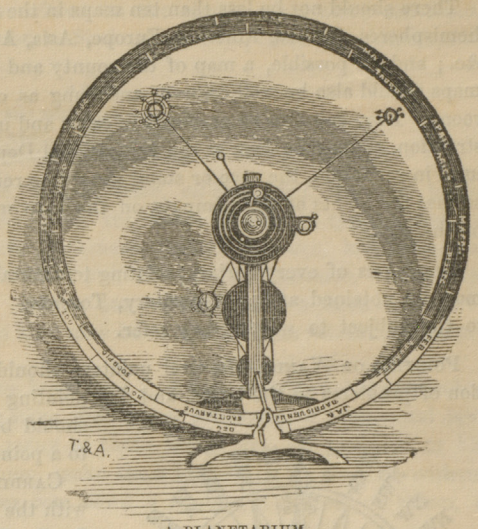

WOODEN FRAME GLOBE.


BRONZE FRAME GLOBE.


SEMI-FRAME GLOBE.

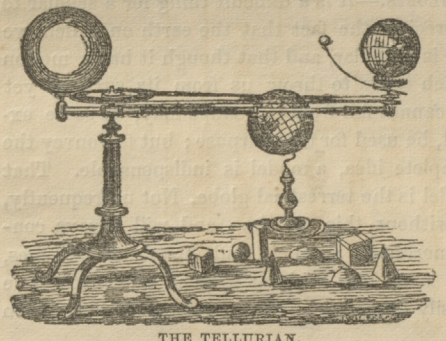
also enable the teacher to impart some knowledge of astronomy. Globes are generally constructed in pairs, and though the terrestrial is more useful, and better calculated to impress the true idea of the thing represented, than the celestial, yet both will be found highly advantageous.

A hemisphere globe supplies a want long felt, viz.: An illustration, which any child can understand, of the reason of the curved lines on a map, and shows how the flat surface is a proper representation of a globe. Two hemispheres are united by a hinge, and, when closed, a neat little globe is presented; when opened, two maps are seen, showing the continents, as if through transparent hemispheres.



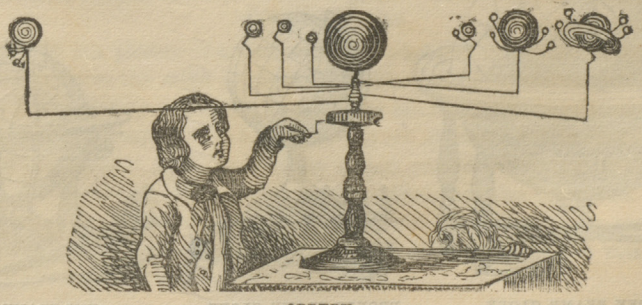
A PLANETARIUM.

THE TELLURIAN, OR SEASON MACHINE.—As a useful accompaniment to the globe and maps, in the study of geography, we notice the tellurian, or season machine. Among the most difficult phenomena presented to the minds of children, are the changes of the seasons—the revolutions of the moon around the earth, and the earth around the sun—and the subject of tides. These, and several others, may be illustrated and explained by the aid of this machine. The science of geography, in its common acceptation, includes, with "a description of the surface of the earth," some account of its physical phenomena—of its people, manners, customs, religion, and laws; and of its relation to the other parts of the solar system. In this view, the study of the earth's motions and changes, although belonging to the science of astronomy, might properly be classed among those subjects to be taught in the school.



THE TELLURIAN.

ASTRONOMY.—The apparatus to which we refer, for the study of the science of astronomy, consists of the Orrery, or model of the planets, revolving in their various orbits



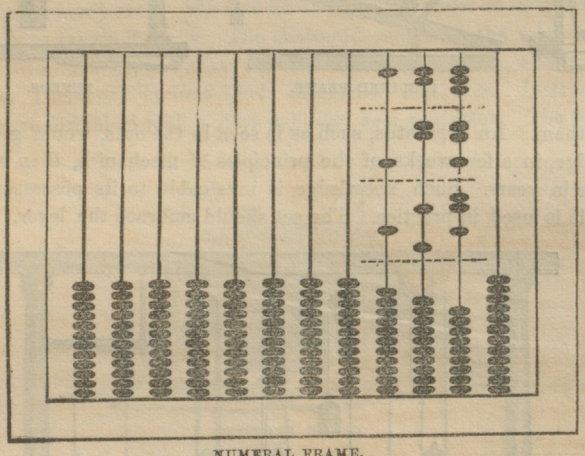
ORRERY.

and surrounded by their satellites and put in motion by a crank or spring. The Teles cope, without which we cannot see very far into this science; the Tellurian, as above; and the Celestial Globe.

IV. ARITHMETICAL TABLES—NUMERAL FRAMES—FORMS AND SOLIDS.

Multiplication Table.—In order to acquire facility in using numbers, the multiplication table must be committed to memory. To facilitate the memorizing of abstract numbers, musical association may be used. Cards, large enough to be seen across the school-room, should be hung around. They will serve as ornaments to the room, and answer the double purpose of assisting the memory and training the vocal organs. It is an immense labor to learn these tables. If any one doubts this, let the attempt he made to commit the numbers from twelve times twelve to twenty-four times twenty-four, and the doubt will be dispelled. Everything should be done to assist children, and make pleasing such hard labor, in which the thinking powers take little part.

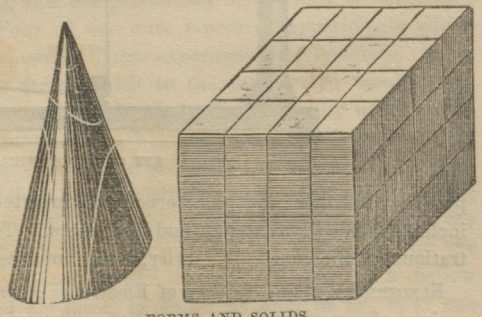
The Abacus, or Numeral Frame.—The cut shows a frame supporting twelve rows of little wooden balls, strung on wires, along which they move readily. The simple



NUMERAL FRAME.

rules of arithmetic are difficult to acquire abstractly. Children count by means of their fingers, until they acquire proficiency. This instrument is better, as the teacher can instruct a whole class or school at the same time. Involution and evolution may be illustrated, by means of the instrument, to those further advanced in mathematical study.

Geometrical Solids.—A portion of practical arithmetic, in most or all the text-books now in use, is devoted to the mensuration of solids. Such solids should always be put into the hands of the pupil. Cubes, cones, prisms, pyramids, spheres, hemispheres, spheroids, cylinders, and sections of each, should comprise a portion, at least, of the set. If measures of length, as the foot, divided into inches and nails—yard and rod;



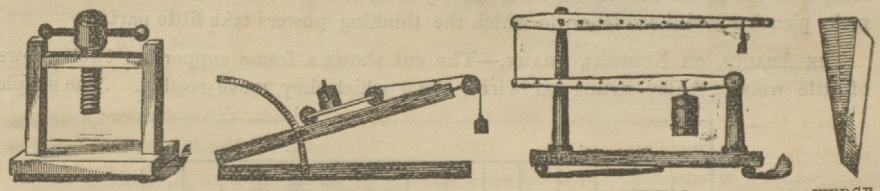
FORMS AND SOLIDS.

and measures of capacity, as pint, quart, gallon, and half-bushel were added, the assortment would be more useful and complete. Solids, representing timber and boards of different measurements, should also be secured.

Cube Root Block.—To make apparent the reason of the rules for the extraction of cube and square roots, the sectional cube block should be used. This block, or rather number of blocks united, forms a cube. The parts may be separated from each other, being held together by wire pins. In connection with the abacus before mentioned, the whole subject may be rendered perfectly plain by its use. The cost of the above articles depends upon their size and the finish put on them.

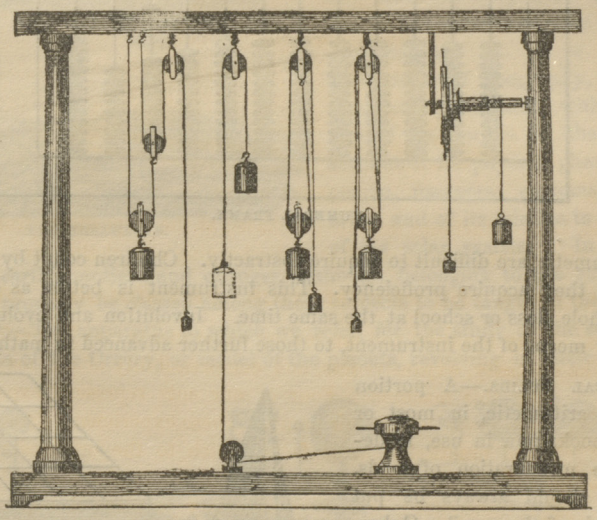
V. MECHANICAL POWERS—ELECTRICAL APPARATUS.

Mechanical Powers.—The principles of natural philosophy, in their practical application, should be seen and understood in school. Many arithmetical operations are



SCREW. INCLINED PLANE. LEVERS. WEDGE

based upon them. An apparatus, such as is seen in the cuts, would give a better practical knowledge, in a few weeks, of the principles of mechanics, than would be learned by experience in years. Such knowledge is invaluable to its possessors, as every day some principle is used in practice. The set should embrace the lever, simple and com-

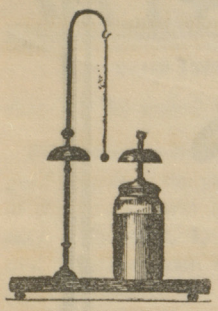


SET OF MECHANICAL POWERS.

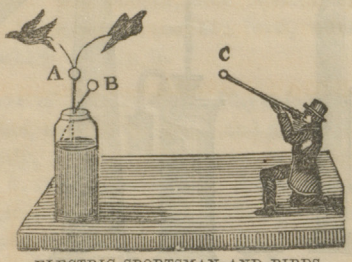
pound; the wheel and axle, erect and inverted; the pulley, fixed and moveable; the inclined plane; the wedge and the screw. To these might be added a set of illustrations for the centre of gravity, both amusing and instructive.

Electricity.—The science of Electricity affords perhaps as great and as interesting a variety of experiments as any other. The principles of the science may be presented

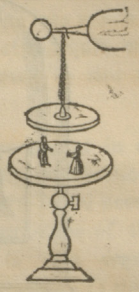
in so many applications, as to keep the student in constant wonder and delight. By aid of apparatus the operator seems invested with magical or supernatural power. He calls this invisible agent into active life, directs its energy, and controls its force. Now, it appears darting and flaming, sparkling and crackling like the lightning's flash; and now subdued and tame, it rings a chime of bells. Now like an engine of death the birds fall before the mimic gun, charged to destroy; and again, it causes light-footed



ELECTRIC BELLS.

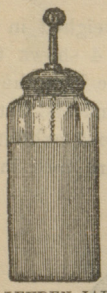


ELECTRIC SPORTSMAN AND BIRDS.

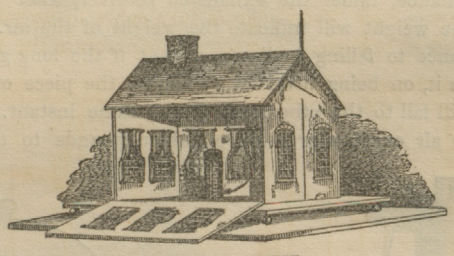


DANCING FIGURES.

figures to dance a merry reel. We fear its force, we wonder at its greatness, and we laugh at the curious freaks it plays. The shattered model of the miniature house, the head of hair in wild disorder, the miser's plate,—the magic picture, all are full of interest and instruction. There are various kinds of electric machines. Instead of the plate, many machines are furnished with a glass cylinder, as a generator. The plate machines



LEYDEN JAR.



THUNDER HOUSE.



LEYDEN JAR.

are deemed the best. Machines may be purchased at the Depository, from thirty to one hundred and fifty dollars, exclusive of jars, discharging rod, chains, &c.

VI. APPARATUS FOR PNEUMATICS, PHYSIOLOGY, OPTICS, &c.

PNEUMATICS.—Many beautiful and interesting experiments may be performed with the air-pump. The elasticity, expansiveness, and compressibility of air, may be illustrated by this machine. Four of our cuts represent experiments which are made by the air-pump. These experiments demonstrate, clearly and practically, some facts, which to the uneducated would seem paradoxical. Thus, to prove that air is the means by which sound is transmitted, it is only necessary to place a bell under the glass receiver of the machine, and to exhaust the air, or, in other words, to pump it out, and then by a contrivance, as seen in fig. 1, to ring the bell, and no sound will be heard. If the air is returned to the receiver, and the bell struck, its presence is discovered by the ringing. Again, to ascertain the weight of air, if a hollow sphere of copper, and air tight, is placed as seen in fig. 3, at one

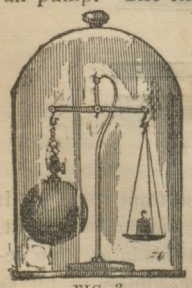
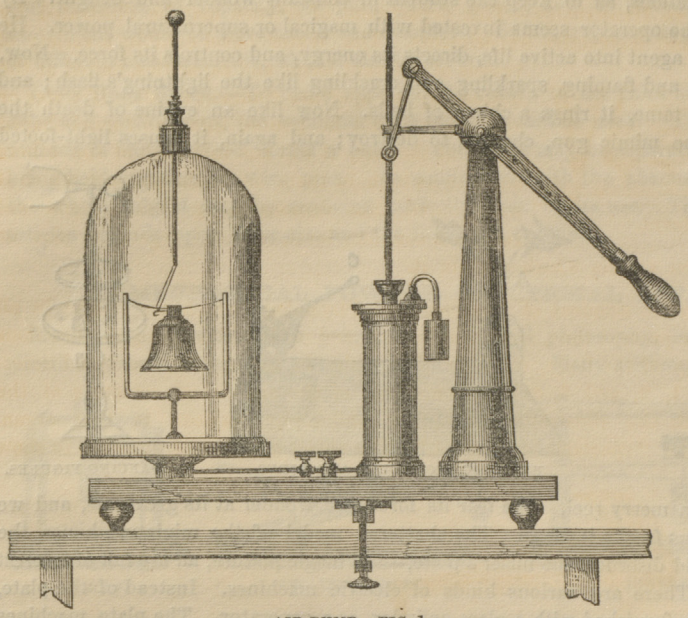


FIG. 3.
WEIGHING AIR.



AIR-PUMP.—FIG. 1.

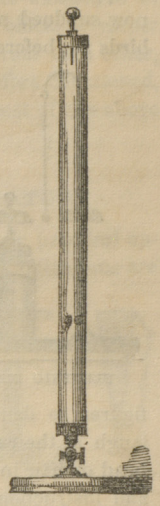
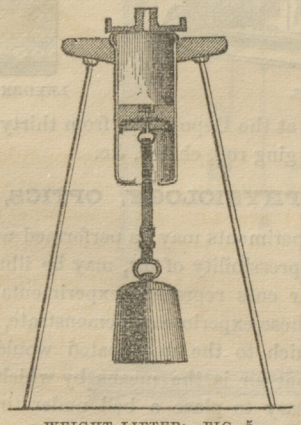
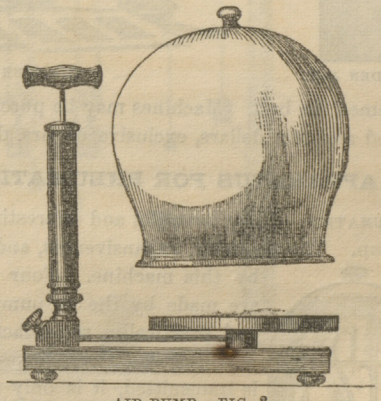


Fig. 4.

end of a delicate balance, under the exhausted receiver, after being weighed in air, the difference of the weight will indicate the weight of the air. Fig. 4 shows that the air offers resistance to falling bodies, and that if the long glass tube have the air removed from within it, on being inverted suddenly, the piece of coin and the feather which it contains, will fall to the other end at the same instant. Figure 5 exhibits a glass receiver. The air exerts a pressure of fifteen pounds to the square inch in all



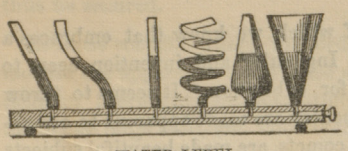
WEIGHT LIFTER.—FIG. 5.



AIR-PUMP.—FIG. 2.

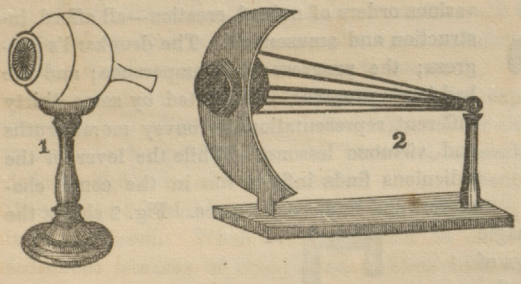
directions, up as well as down; so that when the air is exhausted from the glass, it presses upward externally to fill the vacuum, and carries with it the suspended weight. These and a great variety of others may be subject of illustration in this interesting department. Apparatus illustrating the principles of Pneumatics, is exceedingly useful, as it teaches that which has a constant application to the business of every-day life.

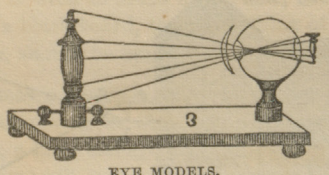
HYDROSTATICS AND HYDRAULICS.—This department of science may be illustrated by many interesting and instructive experiments. The Water Level exhibits a variety of vessels of different forms and capacities, united at the bottom by an aperture common to all. If water or any other liquid be poured into the funnel-shaped vessel at the end, it will run into each of the others and rise as high in them as in the one into which it was poured, thus demonstrating that a liquid will rise to a common level, without regard to size or shape of the united vessels which contain it.



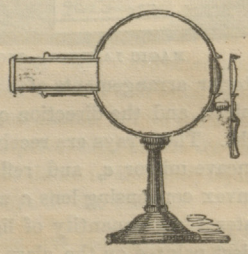
WATER LEVEL.

PHYSIOLOGY.—In the sciences of Anatomy and Physiology which are taught in all good schools at the present time, anatomical charts and models illustrating the functions of the several parts of the body, or their philosophy in the system, are found necessary. The cuts, 1, 2, and 3, exhibit something of the anatomical structure of the eye, together with the illustration of optical philosophy, as seen in that organ. No. 4 represents the "spectacle instrument." The object of this instrument is to show





EYE MODELS.



No. 4.

the reason why the concave glass is suitable for one eye, under certain conditions, and the convex glass, in different circumstances, is better suited to the necessities of another; or in other words, to show why the boy cannot see with his grandfather's specs. Every school in which these studies are pursued, should be provided with such facilities.

A Maniken or model of the human figure, with the muscles and other parts removable at pleasure, and of the form and color of life, will be found of great use and value in this study. A set of physiological plates, at least, should be in every good school.

THE MICROSCOPE is a most valuable instrument in the higher schools. It creates a taste for the collection and examination of the minuter objects of Nature, which so wonderfully display the great Creator's power. Fig. 5 re-

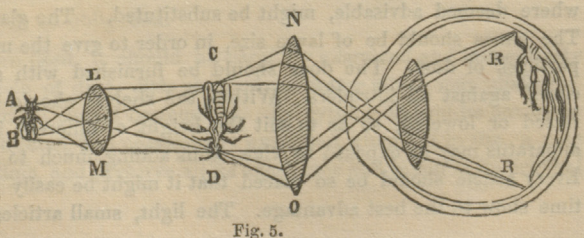
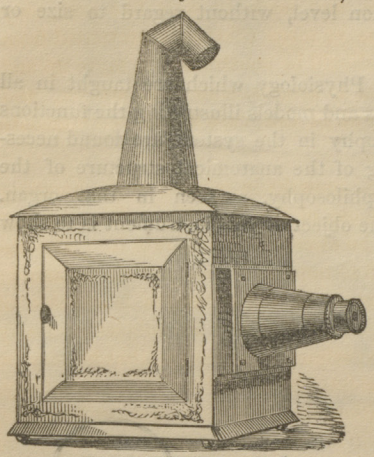


Fig. 5.

presents the effect produced by the lenses of a double microscope. The rays which diverge from the object A, B, are collected by the lens L, M, and form an inverted image at C, D, and so on.

The Magic Lantern.—There is no instrument of which we know that embraces a wider range of application than the magic lantern. Ingenuity and invention seem to have been almost exhausted in providing its subjects for exhibition. It seems to throw light on every subject. By it, the glories of celestial scenery are made apparent to our astonished vision. Systems and suns, constellations and comets, are made beautiful subjects for illustration. An Adam and Eve driven from Paradise; Abraham offering his son; Joseph sold into Egypt; David and Goliah; the flight of the holy family into Egypt; the Prodigal Son,—carry us back to patriarchal days; while the pictures of Venice, Naples, Niagara Falls, and the St. Lawrence, bring us to our own times and places. Botany, with its innumerable specimens of floral beauty; natural history, with its various orders of animal creation—all afford instruction and amusement. The drunkard's progress; the progress of intemperance; and the bad boy's progress,—illustrated by some thirty different representations,—convey moral truths and virtuous lessons. While the lover of the ridiculous finds infinite fun in the comic characters and humorous scenes. Fig. 2 shows the interior arrangements of a small magic lantern, and the direction of the rays of light. These rays are received upon the concave mirror *e*, and reflected to the convex condensing lens *c*, which concentrates a large quantity of light upon the object painted on the glass of the slide inverted at *b*. The rays from the illuminated object at *a* are carried divergent through the lens *a*, forming an image on the screen at *f*.



MAGIC LANTERN.—FIG. 1.

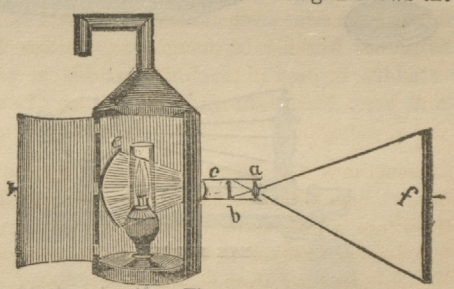


Fig. 2.

VI. MISCELLANEOUS REMARKS.

Case or Closet for Apparatus.—It will be seen, by reference to the chapters on the construction of school-houses, that some provision has been made, in every instance for the keeping and preserving of such apparatus as would receive injury by constant exposure in the school-room. Instead of wooden closet-doors, sash-doors with glass, where deemed advisable, might be substituted. The glass should be of good quality. The panes should be of large size, in order to give the most light, and to exclude all particles of dust. The door should be furnished with a good lock, that it might be closed against all intruders. Within, the shelves should be so arranged as to be easily raised or lowered, so as to suit the height of different instruments, and that all the apparatus may be exposed to view, thus adding much to the appearance of the room. Every article should be so placed that it might be easily taken out, and at the same time show to the best advantage. The light, small articles might be hung at the back

of the closet, on small hooks; while the larger and heavier ones should occupy the shelves. There should be a place for everything, and special care should be taken to keep every thing in the place allotted to it. Neatness, order, and convenience will thus be secured.

In those schools where the ordinary closet would not be sufficiently large to accommodate the apparatus, a neat case should be prepared, of the required length and height, made of thoroughly seasoned stuff, and closely joined together. The doors should be made like large sash, and filled with large, strong panes of glass, well put in. Instead of being hung on hinges, the doors should be double, and made to slide like sash, only horizontically instead of vertically. Dust can thus be more effectually prevented from entering and injuring the apparatus. The shelves should be constructed to move up and down at pleasure, like those of a book-case, in order to accommodate large articles, and facilitate their removal at pleasure. One apartment of this case might accommodate the library of the school.

The Use and Care of Apparatus.—Some general remarks in relation to the handling of apparatus, may not be inappropriate at the close of this chapter. The teacher should understand his subject thoroughly before he attempts to illustrate it. The object of such illustration is, to teach, to convince and to impress the subject on the mind; if the illustration is not as complete and satisfactory as the apparatus is capable of making it, failure and mortification is the result. Comprehending the subject as clearly as possible, the teacher should practice all the experiments in private, that he may be well prepared when he comes before his school or class. He should try them repeatedly, in order to be perfectly familiar with their operation, and in order to acquire accurate, delicate, and successful manipulation. When about to use the apparatus, it should be thoroughly examined and freed from dust or specks, which it may have contracted since it was last used. When in use, it should be carefully treated and not entrusted to the indiscreet working of thoughtless, careless children. Children should not be permitted to handle, or even to touch any article, except by the express permission of the teacher. Not even a black-board, to say nothing of anything else more liable to accident, injury, and abuse, should be used by the scholars, unless under the eye of the teacher.

Sometimes a teacher may find a portion of his apparatus not incomplete working order. Something in the complicated machinery, very trifling, perhaps is wrong. A little care, a little management, and study, and a little patience (always a cardinal virtue in a teacher,) will, in most cases, make all right; if not, no bungling careless hand should be permitted to attempt its repair, but it should be put carefully by, that a proper person may be employed to investigate the mischief and apply the remedy.

For the greater security of the property of the school, the article of agreement between the teacher and the board should be so written, as to make the teacher individually responsible for all damage to school furniture, windows, apparatus, &c., caused by his own misuse, carelessness, or neglect. Such a specification would insure interest and attention in those matters, which are so often neglected, because the teacher would have a pecuniary interest in their preservation. No teacher should be employed who would not willingly assume such an obligation.

After the apparatus has been used, it should be carefully examined and immediately put in the case. Every particle of dust, dirt, soot, oil or water which may disfigure, corrode or injure the instrument should be removed. Everything should be put by in complete order; and if thus treated, and occasionally examined when not in use, a case of apparatus will last a long time, and preserve all its excellence and much of its original lustre and beauty.

VI. EXTERIOR OF THE SCHOOL-HOUSE.

GYMNASTICS AND CALISTHENICS.

I. INTRODUCTORY REMARKS.

In the official "*Report on a System of Public Elementary Instruction for Upper Canada,*" by the Chief Superintendent of Education, are the following remarks on *Physical Training* in our Schools :—

"On the development of the *physical* powers, I need say but a few words. A system of instruction making no provision for those exercises which contribute to health and vigour of body, and to agreeableness of manners, must necessarily be imperfect. The active pursuits of most of those pupils who attend the public schools, require the exercise necessary to bodily health; but the gymnastics regularly taught as a recreation, and with a view to the future pursuits of the pupil, and to which so much importance is attached in the best British schools, and in the schools of Germany and France, are advantageous in various respects,—promote not only physical health and vigour, but social cheerfulness; active, easy, and graceful movements. They strengthen and give the pupil a perfect command over all the members of his body. Like the art of writing, they proceed from the simplest movement, to the most complex and difficult exercises, imparting a bodily activity and skill scarcely credible to those who have not witnessed them.

"To the culture and command of all the faculties of the mind, a corresponding exercise and control of all the members of the body is next in importance. It was young men thus trained that composed the vanguard of Blucher's army; and much of the activity, enthusiasm, and energy which distinguished them, was attributed to their gymnastic training at school. A training which gives superiority in one department of active life, must be beneficial in another. It is well known, as has been observed by physiologists, that 'the muscles of any part of the body, when worked by exercise, draw additional nourishment from the blood, and are, by the repetition of the stimulus or exercise, increased in size, strength, and freedom of action. The regular action of the muscles promotes and preserves the uniform circulation of the blood, which is the prime condition of health. The strength of a body or of a limb depends upon the strength of the muscular system, or of the muscles of the limb; and as the constitutional muscular endowment of most people is tolerably good, the diversities of muscular power observable amongst men is chiefly attributable to exercise.' The youth of Canada are designed for active, and most of them for laborious, occupations. Exercises which strengthen not one class of muscles, or the muscles of certain members only, but which develope the whole physical system, cannot fail to beneficial."

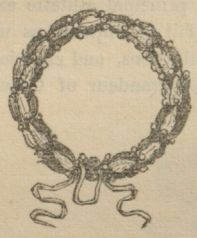
To physical education, great importance has been attached by the best educators in all ages and countries. Plato gave as many as a thousand precepts respecting it. It formed a prominent feature in the best parts of the education of the Greeks and Romans. It has been largely insisted upon by the most distinguished educational writers in Europe, from Charon and Montaigne, down to numerous living authors in France and Germany, England and America. It occupies a conspicuous place in the codes of School Regulations in France and Switzerland, and in many places in Germany. The celebrated Pestalozzi and De Fellenberg incorporated it as an *essential* part of their systems of instruction, and even as necessary to their success; and experienced American writers and physiologists attribute the want of

physical development and strength, and even health, in a disproportionally large number of educated Americans, to the absence of proper provisions and encouragements in respect to appropriate physical exercises in the schools, academies, and colleges of the United States.

II. SKETCH OF THE ATHLETIC GAMES OF THE ANCIENTS.

Among the Greeks, periodical GAMES were of high antiquity, and exerted an important influence upon their national character. Such games were early celebrated, especially in honor of the dead; and Homer, the father of Grecian poetry, describes, in his account of the funeral of Patroclus, the chariot-races, foot-races, boxing, wrestling, throwing the quoit, &c. These games were at length connected with the *religious* festivals of the Greeks, were deemed *sacred*, and regarded as part of their religion. In his epistle to the Grecian Christians, at Corinth, St. Paul refers to these games, in illustration of Christian conflict, duty, and hope. He says he "runs not as uncertainly;" he "fights, not as one that beateth the air;" he has in view, "not a corruptible, but an incorruptible crown." He also "keeps his body under, and brings it into subjection,"—referring to the severe course of physical regimen and exercise required of Grecian competitors, preparatory to their public appearance.

There were four public solemn games in Greece—the Olympic, Pythian, Nemean, and Isthmian. The *Isthmian* games were celebrated near the Isthmus of Corinth, whence they derived their name. They were observed every third, and afterwards every fifth year, and held so sacred that a public calamity could not prevent their celebration. The victors were crowned with a garland of *pine leaves*. The *form* of these crowns was similar to the civic and triumphal crowns given in the annexed engravings; but in other respects they differed.



TRIUMPHAL CROWN.



CIVIC CROWN.

The *Nemean* games were celebrated in the town of Nemea, in Argolis, every third year. The victors were crowned with *parsley*.

The *Pythian* games were celebrated every fifth year, in the second year of every Olympiad near Delphi. The victors were crowned with *laurels*.

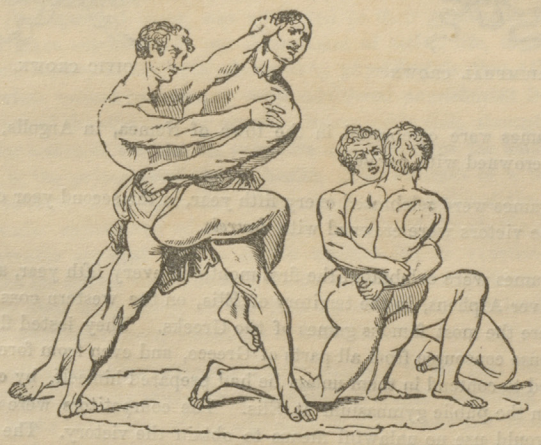
The *Olympic* games were celebrated the first month of every fifth year, at Olympia, a town situated on the river Alpheus, in the territory of Elis, on the western coast of the Peloponnesus. These were the most famous games of the Greeks. They lasted five days, and drew together an immense concourse from all parts of Greece, and even from foreign countries. No one was permitted to contend in them unless he had prepared himself, by continual exercises, for ten months, in the public gymnasium at Elis. The competitors were obliged to take an oath that they would use no unlawful means to obtain the victory. The prize bestowed on the victor was a crown of *olive;* yet this honor was considered equal to the *victory of a general* among the Greeks, and to a *triumph* among the Romans. Thucydides informs us that during the celebration of these games, a sacred truce was observed between all the States of Greece; all hostile operations were suspended, and, for the time, they regarded each other as fellow-citizens and brethren.

The only authentic chronologyy of the Greeks is connected with these games. The space (four years) that intervened between one of their celebrations and another, was called an *Olympiad.* The era of the first Olympiad is 776 years before the Christian era. The Olympiads may be reduced to the common era, by multiplying the Olympiad, immediately preceding the one in question, by 4, and adding the number of years to the given Olympiad, and, if B.C., subtracting the amount from 777; if A.D., subtract 776 from the amount.

The exercises practised at these games were, first, foot-races alone; but they afterwards consisted also of throwing the quoit, boxing, wrestling, horse, and chariot races. At that period, when gunpowder was unknown, and war had not become a science, and each battle was only a multitude of single combats, such exercises of bodily strength and activity were much cultivated by most ancient nations; but the Greeks were the first to reduce them to a system, and to invest them with the importance of a national institution.

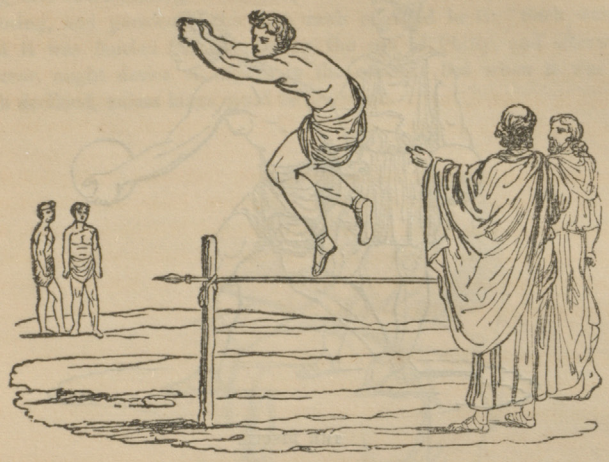
These games were not wholly confined to gymnastic and athletic exercises. Contests were, also, at later periods, admitted between poets, orators, musicians, historians, philosophers, and artists of different descriptions. It was there that portions of the history of Herodotus were first recited or read; and it was by thus listening to the fascinating tales of the Father of profane history, that Thucydides first caught the inspiration which prompted him to write a history as philosophical as it is brilliant, and as charming as it is profound. It was at these games, also, that Lysias recited his harangue on the fall of the tyrant Dionysius. Intellectual enjoyments thus became blended with social amusements and athletic contests; and assemblages which first produced martial skill and prowess, were, in after ages, productive of social and intellectual refinement.

The following illustrations will give some idea of the principal athletic exercises which were practised at the Grecian games, and which cannot fail to impress us with the much greater elevation of modern taste, and manners, and institutions, and especially of religion and morals, notwithstanding the boasted refinement and grandeur of Grecian taste and character.



WRESTLING.

In wrestling, the competitors were nearly or quite naked, and they seem to have displayed great skill and agility. Excited by the presence of a vast assembly, they put forth amazing efforts, and though bruised and maimed in the struggle, they gave no evidence of suffering.



LEAPING.

Leaping was performed by springing over a bar. No one was permitted to enter into this sport, at the Olympian games, who had not practised ten months.



BOXING.

Boxing was a favourite sport, and appears to have been practised much as it is now in England. No unfair advantage was allowed in this or any other contest. The least trick was severely punished.



THE DISCUS.

Throwing the *discus* or *quoit*,—a round piece of stone, iron, or brass,—called forth the energies of the most powerful men; and the feats performed, in hurling large weights, were astonishing.



RUNNING.

Running was practised, and if we may believe the accounts which are given by Greek writers, the racers must have surpassed the fleetest of modern pedestrians.



CHARIOT RACING.

Horse-racing and chariot-racing were conspicuous among the sports. The latter was particularly imposing, and persons of the first rank engaged in it. Such was the applause bestowed, that it was fancied that Alexander, the son of Philip, and afterwards the celebrated conqueror, might desire to engage in the contest; but when it was proposed, the haughty youth declined, unless kings could be his rivals.



MODE OF YOKING THE HORSES.

The mode of attaching the horses to the chariot, by means of a plain strait curricle-bar, is shown in the annexed figure. It was extremely simple, and left the horses quite free in their movements. The war-chariot differed but slightly from the racing-chariot, as will be seen by the following illustration.



WAR CHARIOT.

We also give illustrations of the military knights, on horseback; a war-galley; the foot soldier; the military leader; and, to complete the series of illustrations of ancient social life, the figure of an emperor, patrician, plebeian, and slave.



MILITARY LEADER.



MILITARY KNIGHT.

The military knight was one of a body appointed originally, as is supposed, by Romulus. The knight was selected from the patrician families, and mounted at the public expense, to serve as a body-guard to the king.

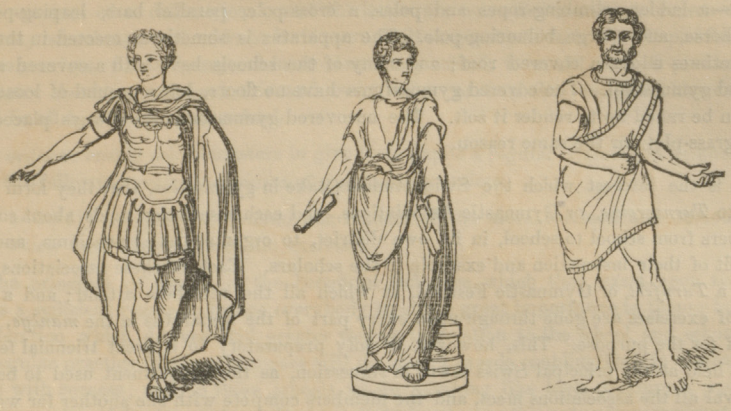


A WAR GALLEY.



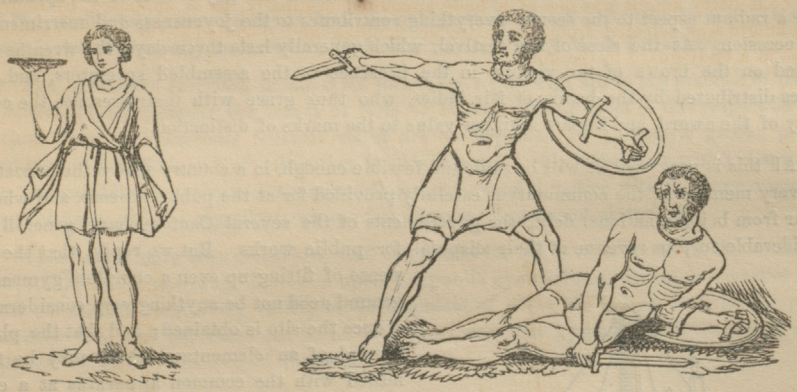
ROMAN SOLDIER ON MARCH.

War-galleys were frequently employed, some simply as transports; while on the deck of others, towers were erected from which missiles might be discharged.



EMPEROR. PATRICIAN. PLEBEIAN.

The emperor, patrician, and plebeian of ancient Rome, are represented by the modern English ranks of king, lords, and commons. The slaves and gladiators were the lowest grades.



SLAVE. GLADIATORS AWAITING THE SIGNAL.

The gladiators fought with swords, and were exhibited at funerals and public festivals, for the amusement of the Roman people. They were at first taken from captives in war, or malefactors; afterwards from slaves trained to the profession.

The first poets and musicians were assembled from all quarters, and an immense crowd of rich and poor, high and low, gathered to witness those displays, which were not only interesting from the excitement they produced, but from the sanction that the popular religion bestowed upon the occasion. It would appear that, at the present day, there is no public festivity, in any country, which engages so deeply the passions of mankind as the games of ancient Greece and Rome.

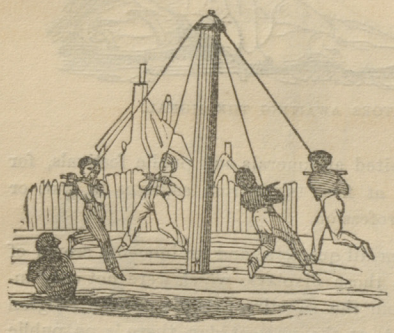
In the "*The English Journal of Education*," for January, 1852, and the succeeding months, we find a large space occupied, and numerous wood-cuts given, in illustration of this subject. From these cuts we have had wood-engravings made for this work. We therefore lay them before our readers, with extracts from the preliminary and accompanying remarks of our English contemporary:—

"In Switzerland, almost all the schools, both primary and secondary, are provided with a *manège*, or gymnasium, having all the machinery necessary to a complete course of gymnastic

exercises—a ladder, climbing-ropes and poles, a cross-pole, parallel bars, leaping-poles, a vaulting-horse, and a large balancing-pole. The apparatus is sometimes erected in the open air—sometimes under a covered roof; and many of the schools have both a covered and an uncovered gymnasium. The covered gymnasiums have no floors, but a ground of loose sand, which can be raked up to render it soft. The uncovered gymnasiums are always placed in a field, or grass-plot, for the same reason.

"Such is the interest which the Swiss students take in gymnastics, that they form themselves into *Turnvereins*, or Gymnastic Associations, and each association sends about some of its members from school to school, in its own district, to organize the gymnasiums, and give the benefit of their instruction and example to the scholars. Each of these associations holds annually a *Turnfest*, or Gymnastic Festival, at which all the members attend; and a great number of exercises are gone through upon every part of the apparatus in the *manège*, which they held for the purpose. This, however, is only preparatory to a great triennial festival, which is held at the principal Swiss towns in succession, as the government used to be. At this festival all the associations meet, and the members compete with one another for wreaths, prizes, and other distinctions, just as in the old Grecian games, before they had been perverted from their original purpose and degraded into mere exhibitions of particular feats. People assemble from all parts of the country to witness the performances; the fine national songs of Switzerland and Germany, sung in chorus by the friendly antagonists, excite and sustain the general enthusiasm. The standards of the associations, and the gay clothes of the spectators, give a radiant aspect to the scene: everything contributes to the joyousness and merriment of the occasion. At the close of the festival, which generally lasts three days, the wreaths are placed on the brows of the victors, in the presence of the assembled spectators, and the prizes distributed by the hands of fair ladies, who thus grace with their presence the ceremony of the award, and impart a higher value to the marks of distinction.

"All this is very well, it will be said, and feasible enough, in a country where the education of every member of the community is carefully provided for at the public expense, and where, so far from being a national debt, the governments of the several Cantons have generally a considerable surplus revenue at their disposal for public works. But we reply, that the expense of fitting up even a complete gymnastic ground need not be anything very considerable if once the site is obtained; and that the playground of an elementary school may be furnished with the common apparatus at a cost almost insignificant. The most expensive piece of apparatus, after all, is the circular swing, which has already been erected in the playgrounds of so many schools. It is certainly right to provide first for this most exhilarating of gymnastic exercises. If the school-master were competent to give a course of gymnastic exercises, he would have no difficulty, we imagine, in inducing the managers to supply the necessary apparatus..



CIRCULAR SWING.

"But, as our readers are aware, there is a large class of gymnastic exercises which do not require any apparatus at all; and these are, in fact, more essential than the others, to which they are preliminary and introductory. They are such, namely, as are designed to develope the activity of the limbs rather than to call forth the physical strength. These should not be neglected in any school for children. They are very carefully taught in many of our boarding schools; and we cannot see that they are less useful to the children of the poor than to those of the middle classes. This is one of the few particulars in which the middle schools are not behind the best elementary schools, and it is owing to the fact that the former are able to pay

for the services of a drill-serjeant, and the latter are not. But there is no reason whatever why every school-master should not be his own drill-sergeant; in fact, were it possible to procure the services of a drill-sergeant in an elementary school, it would be still preferable that the master should superintend this and every other part of the discipline himself—for he should be all in all to his own school.

"In order to enable school-masters to give their pupils a regular training in gymnastics, we insert the following graduated course of gymnastic exercises.

"It is hardly necessary to remind our readers of the more common and obvious advantages which result from gymnastic exercises.

"The principal, of course, is the beneficial influence which they exert upon the health. This is a sufficient reason to induce everybody to attach great importance to them; but it is a consideration which derives still greater weight in relation to the school and school-master. The regular practice of these exercises will do much towards enabling both to discharge their duties with success; and, in those schools where anything like high pressure is put on, will act as a most useful safety-valve. Besides, light hearts are the natural concomitants of good health; and certainly nowhere are they more desirable than in an elementary school, where there are already annoyances enough, in all likelihood, without those which result from the jarring of bad tempers. How much more pleasantly, both to teacher and taught, does the work of the school proceed where these are absent, and a cheerful tone prevails.

"We would beg leave, however, in a special manner, to call attention to one advantage which is not so generally understood. It is thus referred to by M. de Fellenberg:—

"'The *gymnastic exercises*, in all their forms, are a powerful aid to the practice of design, in cultivating the taste for the beauty of *form or motion*. Their effect in this respect is very obvious; and the occasional festivals which are accompanied by gymnastic games, present examples of a high degree of cultivation in this respect. It is a spectacle which charms the eye, and exhibits the intimate connection of easy and graceful motion with the improvement of physical force, and the capacity to escape from danger or surmount obstacles.'

"It has accordingly been remarked, that one reason for the pre-eminence of the ancients in sculpture, was the patronage bestowed upon the public gymnasiums, in which the artist could form his models from every variety of development of which the human form is susceptible. However this may be, there can be no doubt whatever that gymnastics do contribute materially to the *æsthetic* training of the mind."

III SKELETON ILLUSTRATIONS OF GYMNASTICS.

The first *position* in which the body must be placed, is the following:—

Heels close; toes turned outwards, nearly at right angles; body upright; shoulders thrown back; stomach kept in; head easy; arms hanging straight by the sides; hands closed, with the thumbs inside.

The habit of readily realizing this position having been gained, the first gymnastic action is to be attempted.

Action 1. Bring the arms quickly up in front, as high as the shoulders (nails turned upwards (*a* fig. 1), then swing them forcibly backwards, at the same time turning the nails backwards (*b* fig. 1), keeping the body perfectly upright. This action (*a*) Fig. 1. (*b*) being mastered, and having been practised for five minutes, the next action is to be attempted.



Action 2. Stand erect, as in the *position* first described. Put the hands on the hips, the thumbs placed behind, the fingers in front, and the feet close, and then rise as high as possible on the toes. Fig. 3 will illustrate this action to a certain extent. This action should be practised five minutes.

The third action may now be attempted.

Action 3. The elbows are to be drawn back, so that the fists may be close to the sides (*a* fig. 2); then throw the arms straight forward (*b*), and then back as before. The gymnast must become perfect in this before proceeding any further; a perfection in this action being intimately connected with, indeed an essential to, the satisfactory performance of many other actions.



(*a*) Fig. (*b*)

Action 4. The feet are to be brought close, the hands on the hips; then rise on the toes, and jump on the toes, with the knees kept perfectly straight (fig. 3.)—This action is to be performed for five minutes; and the twelve first actions may be performed during one hour before breakfast, five minutes to each.

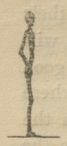


Fig. 3.

In the next action the arms are again brought into activity.

Action 5. The fists are to be brought up to the shoulders; the elbows being close to the sides. The arms are then to be thrown upwards, and then brought back again to the previous position.



Fig. 4.

Action 6. The hands are to be fixed on the hips, the feet close, and then throw the legs in front alternately; the knees being kept straight, the gymnast not moving from his first place, and keeping the body upright (fig 5.)

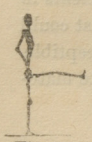


Fig. 5.

Action 7. The fists are to be brought up to the shoulders, as in action 5, but to be turned a little inwards; the elbows close to the sides, as in action 5; and then throw the arms downward, and bring them back as before.

Action 8. The feet are to be brought close; the hands fixed on the hips; then throw the legs sideways (alternately), the toes being kept in front (fig. 6.)



Fig 6.

Action 9. This may be regarded as the actions 5 and 7 combined. The fists are to be brought to the shoulders, the elbows close to the sides; then throw the arms upwards, then backwards, next downwards, and finally return. This combination of action requires much muscular power, and calls numerous muscles into activity, and cannot be well performed until the muscles of the leg have been strengthened by the previous exercises. For, though it seems difficult to those unacquainted with the muscular system to conceive the connection between these motions of the arms and the power of the muscles of the legs, the anatomist will be aware that, without considerable power in the muscles of the legs, these motions of the arms and the position of the body to be preserved could not be realized.

Action 10. This again brings the gymnast to his legs. He puts his hands on the hips, keeps his feet close, and then, standing on his toes, kicks the thighs alternately with his heels (fig. 7.)

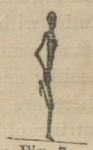
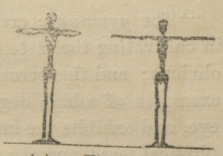


Fig. 7.

Action 11. In this action the arms and the muscles of the back are called into action. Raise the elbows to the height of the shoulders (*a* fig. 8), with the fists on the front of the shoulders, the nails turned inwards, and then throw the arms forcibly back (*b*), the body being kept upright.



(*a*) Fig. 8. (*b*)

Action 12. This action is connected with the preceding. Raise the elbows as high as the shoulders; fists on shoulders, nails being downwards; then throw the arms forcibly back, keeping them level with the shoulders.

Action 13. This action exercises the lower extremities and the muscles of the back. The hands are to be put on the hips; the feet are placed close; then rise on the toes, and kick the thighs with both the heels at once (fig. 9.)



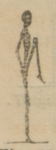
Fig. 9.

Action 14. In this the arms are to be turned round, front to back; body quite upright. This action has been deemed likely to be injurious, and it would be, if attempted previously to the exercises already detailed; but from what has been stated regarding the articulating surface of the head of the arm bone with the cavity of the shoulder-blade, it will be apparent that such action is perfectly scientific (fig. 10.)



Fig. 10.

Action 15. The feet are to be brought close; the hand fixed on the hips. Then touch the breast alternately with the knees, the toes pointing to the ground, taking care to keep the body perfectly upright. This exercise will be at first difficult, but it is astonishing the effect that it has in influencing the circulation, and thereby promoting health.


Fig. 11.

Action 16. This is similar to action 14, except that the arms are to be turned from back to front, instead of from front to back.

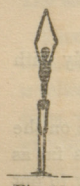
Action 17. This is looked upon by many as almost insurmountable, and much jocularity is produced by the failures in the first few attempts. The hands are to be fixed on the hips, the feet being close. Then rise on the toes, bend the knees, and lower the body gradually till the thighs touch the heels; the knees being kept close and the body upright, rise very gradually.


Fig. 12.

Action 18. This next action has a most powerful effect in giving full activity to the muscles of the chest. Bring the right fist to the left shoulder; extend the left arm in a line with the shoulder; throw the right arm towards the right side, nails towards the ground; then bring the left fist to the right shoulder, thus altering several times.


Fig. 13.

Action 19. The feet are to be brought close, the hands on hips; then raise the left leg behind, stand on the right toe, and kick the right thigh with the right heel.

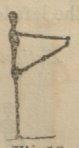

Fig. 14.

Action 20. Open the hands; then raise the arms sideways, and touch the back of the hands over the head (fig. 14.)

Action 21. The hands are to be placed on the hips; the feet close; then raise the right leg behind, stand on the left toe, and kick the left thigh with the left heel.

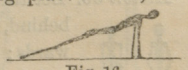
Action 22. Open the hands, bring them in front (the palms touching), and swing the arms backward the height of the shoulders, till the backs of the hands meet behind.

Action 23. The feet are to be placed close, the hands on the hips. Raise the right leg in front, and hold the right toe with the right hand for some time; then do the same with the left (fig 15.) The knees are to be kept straight.


Fig. 15.

Action 24. Open the hands, extend them in front, the backs touching; swing them in a line with the shoulder till the palms touch behind. See action 21.

Action 25. The feet being placed close, the hands fixed on the hips, rise on the toes, then bend the knees, and lower the body gradually till the thighs touch the heels (see action 17); extend the arms in front, and fall forwards, so that the body forms a straight line from the head to the heels, and rests on the hands and the toes.


Fig. 16.

Action 26. The feet being placed close, the hands open, the arms straight upward, the palms in front, bend the body forward, and touch the ground with the points of the fingers. The knees are to be kept straight (fig. 17.)


Fig. 17.

Action 27. This is the same as action 25, only springing up and clapping the hands.

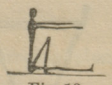
Action 28. This action is performed by two, standing opposite to or facing each other. The left hand on hip, the right foot forward, the right arm in front; then grasp each other's hands, and try to bring the arm down to the right or left.

Action 29. The feet close, the hands on the hips; cross the legs, bend the knees gradually, sit down, and rise again (fig. 18.)


Fig. 18.

Action 30. The reverse of action 28, viz., with the left arm, &c.

Action 31. The feet close, the arms extended in front, raise the left leg in front, bend the right knee gradually, and sit down on the ground; then get up again in the same position.


Fig. 19.

Action 32. This is performed by two persons facing each other. The left hand on the hip, the right foot in front; lock the middle finger on each other's right hand, and pull back (fig. 20.)


Fig. 20.

Action 33. As action 31, performed with the left leg.

Action 34. As action 32, with the left hand.



Fig. 21.

Action 35. The feet close, the hands on the hips, jump up, at the same time spreading out the legs (fig. 21.)

Action 36. Let the palms of the hands touch behind, the fingers pointing downwards; turn the fingers inward, and bring the hands as high as possible up the back, taking care to keep the palms of the hands close together (fig. 22.)



Fig. 22.



Fig. 23.

Action 37. The feet close, the hands on the hips, jump up, and spread out the legs, and cross them alternately (fig. 23.)

Action 38. This is performed by two sitting on the ground, who face each other, the soles of the feet touching, then grasping a stick, and pulling against each other, first, with knees straight; secondly, bent; and third, with legs open.

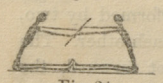


Fig. 24.

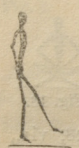


Fig. 25.

Action 39. The hands on the hips, the right foot in front, the toe pointing downwards; spring or jump twice on the right toe, and twice on the left, alternately, the knees being kept straight.

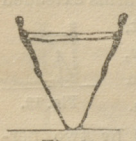


Fig. 26.

Action 40. Hook each other's hands, the toes opposite; then lean back, and go und quickly (fig. 26.)

Action 41. As action 39, left foot in front.

Action 42. The feet close, the hands on the hips; rise on the toes, and jump forward with straight knees.

Action 43. Grasp the left hand with the right, bring the arms behind the head, and move them from one side to the other (fig. 27.)



Fig 27.

Action 44. Action 42 backwards.

Action 45. Bring the right arm round the neck and chin, and try to catch the right ear with the right hand.

Action 46. The feet close, the hands on the hips, run forward, and kick the thighs alternately.

Action 47. Action 45 with the left arm.

Action 48. The feet close, the hands on the hips; jump forward, and kick both thighs with both heels at once.

Action 49. See action 17, fig. 12; then extend the arms in front, and fall down on the hands, the arms being straight, the body being brought so as to form a straight line from head to heel, as in action 25. Remain in this position a short time; then bring the feet, by a jump, between the hands, and rise (fig. 28.)



Fig. 28.

Action 50. The hands on the hips, the left leg in front, the toes towards the ground; then jump forward on the right toe, both legs quite straight (fig. 29.)



Fig. 29.

Action 51. See action 49, then spring up from the ground and clap the hands. Rise as in action 50.

Action 52. The same as action 50, only with the left toe.

Action 53. The feet close, the hands on the hips, then spread the legs gradually as far as you can, and then try to put the palms of the hands on the ground, the middle between the legs (with great care), (fig. 30.) This action cannot well be performed until the others, previously described, have been performed with diligence, so as to be performed with ease. Then this action can be performed, and that without much difficulty.

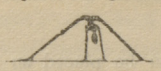


Fig. 30.

Action 54. The hands on the hips; then run forward on the toes, the knees being kept straight.

Action 55. Fold the hands behind, put the right foot to the right side forward as far as you can, then bend the right knee, and try to touch the ground with the forehead (fig. 31.)

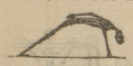

Fig. 31.


Fig. 32.

Action 56. The feet close, the hands on the hips, then rise on the toes, and jump to the right or left side quite round (fig. 32.)

Action 57. The same as action 55, only with the left leg.


Fig. 33.

Action 58. Lift the left foot behind, bend the right knee, lower the body gradually, touch the ground with the left knee, and rise again (fig. 33.)

Action 59. This action is performed by two facing each other; each party is to fold the arms, the elbows being kept close to the body, raise the left leg behind, hop on the right leg against one another, and try to bring the other out of his position by a blow with the shoulder against his shoulder (fig. 34.)


Fig. 34.

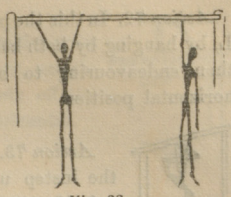
Action 60. This is the same as action 51, on the left foot.

Action 61. This is the same as action 59, only that the left foot is used to hop upon. The blow is given with the left shoulder.

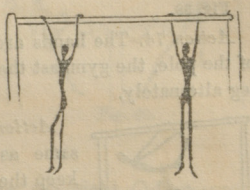
Having thus noticed the actions to be performed by the individual, unaided by any machine, the next branch of gymnastic exercises will introduce the reader into exercises in which the gymnast performs certain evolutions by means of a POLE placed in a *horizontal position.*

In the first exercises, the thumbs are to be on the same side of the pole as the fingers; that is, not grasping the pole as one would a roll of paper: arms straight in a line with the body, so that the power may be more effectually applied to move its weight; the knees are to be kept straight and stiff, unless otherwise expressed.

Action 62. The gymnast is to hang from the pole by one hand; first, by the right, then by the left, six times alternately (fig. 35.)


Fig. 33.

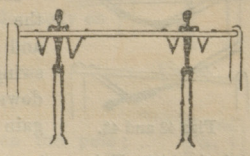
Action 63. In this action the gymnast walks on the hands along the pole: the hands being placed over the pole on the same side with the body (fig. 36, No. 1.)


No. 2. Fig. 36. No. 1.

Action 64. This action is the same as the preceding; only that the hands are under, or grasping the pole on the opposite side of the body.

Action 65. In this the gymnast walks from one end of the pole to the other; the hands being placed over the pole on each side, the face opposite the upright post: first forwards to one end, then backwards to the other (fig. 36, No. 2.)

Action 66. This action consists in rising up and looking over the pole, hands over, three times (fig. 37, No. 1.)


No. 2. Fig. 37. No. 1.

Action 67. The same as the preceding, only with the hands under (fig. 37, No. 2.)

Action 68. The hands are placed on each side of the pole, and then the shoulders are to be brought alternately up the pole; each shoulder three times.

Action 69. This consists in jumping along the pole, the hands over on one side.

Action 70. The same as the preceding, only the hands under.

Action 71. Hands on each side, jumping along the pole. In these last three actions it is advisable to draw up the body a little before making the spring or jump forward.

Action 72. In this the person forms the letter L, by hanging by both hands on the pole, and then endeavouring to bring the legs into a horizontal position.

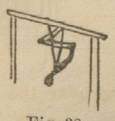


Fig. 38.

Action 73. In this action bring the instep up so as to touch the pole (fig. 38.)

Action 74. The hands are fixed on each side of the pole, the gymnast then throws over each leg alternately.

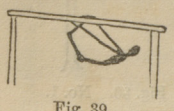


Fig. 39.

Action 75. At first the same as action 73; then keep the instep against the pole, and bring the body between the arms, as in the illustration (fig. 39.)



Fig. 40.

Action 76. The hands are fixed on *each* side of the pole, and the legs are to be brought up on the outside of each arm (fig. 40.)

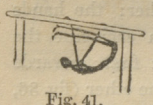
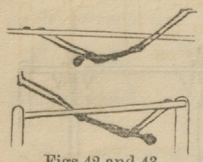


Fig. 41.

Action 77. In this action both hands being fixed on *one* side, the legs are brought between the arms (fig. 41.)



Figs 42 and 43.

Action 78. In this the gymnast swings, and jumps up as he swings back, and comes down on the pole again (figs. 42 and 43.)

Action 79. This action consists in getting *up on* the pole. First throw the right leg over the pole, then, with a spring, bring up the right elbow; lastly, by another spring, bring up both arms straight, so as to sit across the pole (fig. 44.)

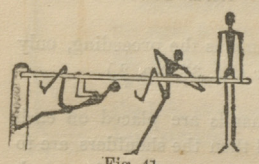


Fig. 41.

Action 80. Draw up the body as high as possible, and, with a spring, elevate both elbows, at once if possible, or one at a time; then rise gradually; the whole of the body being on one side of the pole; change the position of the hands, and come gradually over the pole till the feet touch the ground (fig. 45.)

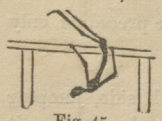


Fig. 45.

Action 81. In this action the hands are fixed one on each side; then jump and change hands; first, with knees bent; second, with the knees straight.

Action 82. Rise up as high as possible, and throw the arms over the pole, holding firmly by them (fig. 46.)



Fig 46.

Action 83. Rise up as before, and try to keep up the body by the right arm only; and then with the left arm (fig. 47.)



Fig. 47.

Action 84. In this action the hands being either over or under the pole, raise the legs up in front, and go quite over the pole (fig. 48.)

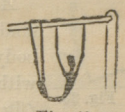


Fig. 48.

Action 85. In this action one leg is to be fixed over the pole, the knee being bent; and then swing completely round (fig. 49.)



Fig. 49.

Action 86. Sit across the pole, and swing round, holding tight, the hands being fixed on each side of the pole (fig. 50.)

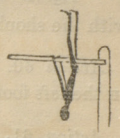


Fig. 50.

Action 87. Get upon the pole as in a previous action, then bring both legs over the pole, so as to sit thereon; then gradually lower the body so as to swing with the arms behind (fig. 51.)

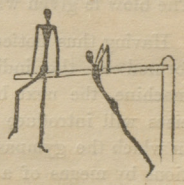


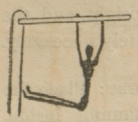
Fig. 51.

Action 88. Get up and over, as in the last action; then catch the pole with bent arms separately; then catch hold of the trousers, and swing backward completely round (fig. 52.)



Fig. 52.

Action 89. Hold the pole by the right arm, then grasp the wrist with the left hand, and try to draw yourself up: then perform the same action with the left arm.


Fig. 53.

Action 90. In this action the letter L is formed by hanging by one arm, see action 72 (fig. 53.)


Fig. 54.

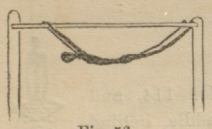
Action 91. Kneel upon the pole, hands on each side, and swing off the pole (fig. 54.)

Action 92. Hanging by both hands on the same side at one end of the pole, and turning from one side of the pole to the other, till you have reached the other end.
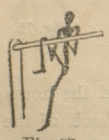
Action 93. In this action the gymnast commences as in action 77, then passes the legs completely through, and hangs them down; he then draws them gradually back between the arms (fig. 55.) This action can only be performed by the experienced gymnast without danger: with him there is none.


Fig. 55.

Action 94. Hang on the end of the pole, the hands on each side, the face towards the post; swing backwards, and catch the pole with the toes, and hang down, as in the annexed figure (fig. 56.)


Fig. 56.

Action 95. First throw the right leg over the pole, then, with a spring, bring up the right elbow in this position; throw the left arm over the pole, and hang in that position (fig. 57.)


Fig. 57.

Action 96. Get up on the pole as in action 80, the arms being straight; then gradually sink down and kiss the pole, and then rise gradually to the first position (fig. 58.)


Fig 58.

Action 97. Sit across the pole, and, with a firm grasp, endeavour to raise the body off the pole till the back is horizontal.


Fig. 59.

Action 98. Throw the left leg over the pole, then at the same time throw both arms over the pole, holding by arm only (fig. 60)


Fig. 60.

Action 99. Throw the right leg over the pole, the left arm being underneath, and the right arm hanging down (fig. 61.)


Fig. 61.

Action 100. Hang on the pole, the hands on each side, and then raise the legs on each side of the pole, as high as possible (fig. 62.)


Fig. 62.

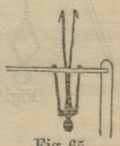
Action 101. Hang on the pole, the hands on one side; then spring at once on to the pole, and balance the body on the arms (fig. 63.)


Fig. 63.

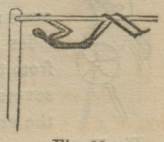
Action 102. Sit on the pole; suddenly drop backwards, and clasp the pole with the hams, hanging down (fig. 64.)


Fig. 64.

Action 103. Hang on the pole, the hands on one side, and gradually bring up the legs till they are perpendicular, the arms being straight (fig. 65.)


Fig. 65.

Action 104. Hang on the pole the hands on both sides; throw both legs over at once, over one side of the pole, then over the other; do this several times (fig. 66.)


Fig. 66.

The Horse exercises must not be attempted until the preceding exercises have been performed, so as to realise perfect capability in their performance. The gymnast should perform only one of these actions at a time, gaining perfect capability in each before proceeding to the next.

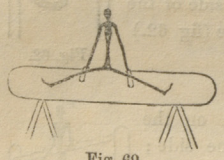
In performing the following exercises, the body and head are to be kept upright, and the knees and ancles straight, unless otherwise expressed, or where a change is absolutely necessary.


Fig. 67.

Action 105. Place the hands on the middle of the pommels, the thumbs inside, and spring up so as to bring the arms quite straight. Do this several times without resting, at first slowly, afterwards more quickly (fig. 67.)


Fig. 68.

Action 106. Hands on the pommels as before, spring up and touch the saddle with the toes (fig. 68.)

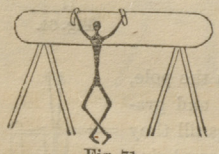

Fig. 69.

Action 107. As action 105; at the same spread the legs so as to touch the sides of the horse with the toes (fig. 69.)


Fig. 70.

Action 108. Spring up, and throw up the right leg, keeping the other straight. Do this several times (fig. 70.)

Action 109. As action 108, with the left leg.

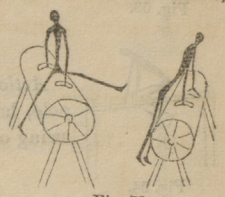

Fig. 71.

Action 110. As action 106, and cross the legs on coming down (fig. 71.)

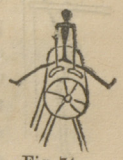

Fig. 72.

Action 111. Jump up, and rest with the hands on the pommels, the arms straight, the thighs against the sides of the horse; spring away from the horse and come back again several times, without coming to the ground (fig. 72.)

Action 112. To mount the horse: Place the hands on the pommels, the thumbs inside, spring up, rest for a moment with the thighs against the sides of the horse, then throw the right leg over the back pommel, and sit perfectly upright in the saddle.—To dismount: Place the left hand on the front pommel, the thumb inside, and the right hand on the saddle in front of the body, and spring off (fig. 73.)


Fig. 73.

Action 113. Mount as directed in action 112; place both the hands close together on the front pommel, the thumbs in front, fingers behind, and arms straight; then raise the body as high as possible several times (fig. 74.)


Fig. 74.

Action 114. As action 113, and swing the body backwards and forwards; knees straight.

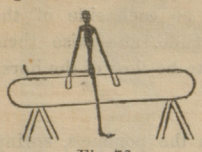
Action 115. As action 114, and bring the feet on the saddle, behind the hands (fig. 75.)


Fig. 75.

Action 116. Jump on the end of the horse, and walk on the hands along the back of the horse, with the body a little raised, as in action 113.

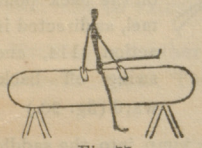
Note.—In springing up, jump from the toes. In sitting on the horse the thighs should press the sides of it, so as to leave a space between the body and the saddle, just sufficient for the open hand between them.

Action 117. Hands on the pommels, spring up, rest a moment, then throw the right leg over the horse, lifting the right hand to let the leg pass over the back pommel into the saddle, bringing down the hand quickly on the pommel. Throw the leg back again, observing the same precautions. Do this several times without coming to the ground.


Fig. 76.

Action 118. As action 117, with the left leg on the other side.

Action 119. Hands on the pommels, spring up, at the same time turn the body a little on one side, and throw the right leg over the front pommel, lifting up the left hand to let the right leg pass (fig. 77.)


Fig. 77.

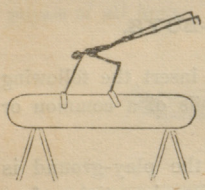
Action 120. As action 119 on the other side, with left leg.

Action 121. Hands on the pommels, spring up, and instead of one leg, as in action 119, throw both legs over in front, so as to come down to the ground on the feet, with the face towards the head of the horse (fig. 78.)

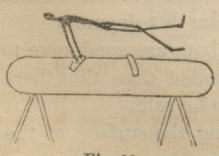

Fig. 78.

Action 122. As action 121, on the other side.

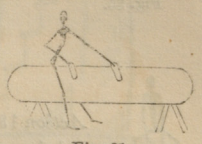
Action 123. As action 110; but instead of coming against the side of the horse, throw both legs over the back of the horse, and come on the toes on the other side, with the face towards the saddle (fig. 79.)


Fig. 79.

Action 124. As action 114; then swinging backwards, cross both legs behind; turn the body, and sit in the saddle, the face towards the tail of the horse (fig. 80.)—N.B. When in crossing the right leg goes over the left, you must turn the body to the right side; and when in crossing the left leg goes over the right, turn the body to the left side.


Fig. 80.

Action 125. Spring on the back of the horse, behind the saddle; place the left hand on the front pommel, and the right hand on the back pommel; raise the body a little, and swing round and sit on the neck of the horse, so as to face the front pommel. Then put the right hand on the front pommel, and the left hand on the back pommel, and swing round on the back of the horse. Do this alternately several times (fig. 81.)


Fig. 81.

Action 126. As action 111; draw up the knees close to the chest, and throw them between the arms over the saddle, remaining on your hands, and the back of the thighs leaning against the opposite side of the horse, but without the feet touching the ground; then draw up your legs again, and bring them back to the first position (fig. 82.)


Fig. 82.

Action 127. Spring up, resting on the pommels with the arms straight; throw the right leg between them over the saddle; bring it back again, and at the same instant pass the left leg over, resting all the while on the hands. Do this several times (fig, 83.)


Fig. 83.

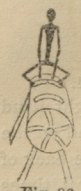
Action 128. Spring up, resting on the pommels, with the arms straight; throw the body over the horse, with the legs spread; first standing, secondly with a run.

Action 129. Hands on the pommels, &c., as in action 127; but throw both legs through, and keep them straight out in the form of the letter L, without touching the saddle (fig. 84.)


Fig. 84.


Fig. 85.

Action 130. Run and jump cleverly over the saddle.


Fig. 86.

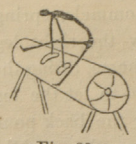
Action 131. Mount, then action 113, and bring the feet before the front pommel, outside of the arms, then behind, alternately (fig. 86.)


Fig. 87.

Action 132. Run, and placing the hands on the pommels, throw the body completely over the front (fig. 87.)


Fig. 88.

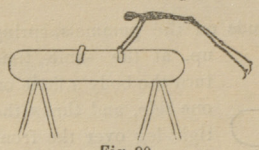
Action 133. Run, and placing the hands on the pommels, take a somerset over the saddle (fig. 88.)


Fig. 89.

Action 134. Hands on the pommels, spring up and throw the legs on each side of the arms outside, and raise them up so as to be clear of the horse (fig. 89.)

Action 135. Hands on the pommels, spring up and kneel on the saddle, bring the knees forward so that the instep touches the saddle, then give a spring and jump off, coming down on the other side on the toes.

Action 136. Jump on the back of the horse, place the hands on the back pommel, as directed in action 114, and swing off backward (fig. 90.)


Fig. 90.

Action 137. Run, and jump into the saddle from behind, and swing the body off from the front pommel, as in action 136.


Fig. 91.

Action 138. Run, and placing the right hand on the back of the horse, spring up, and throw both legs over, as directed in action 121 (fig. 91.)

Action 139. Run from behind, and throw the right leg over the back of the horse, behind the saddle, as in action 119, first on one side, then on the other with the left, afterwards throw both legs over.

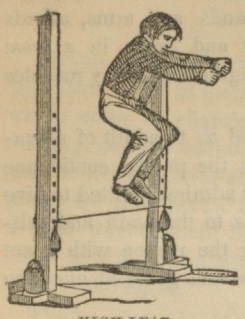
IV. SIMPLE GYMNASTICS FOR SCHOOL-BOYS.

In addition to the foregoing detailed course of gymnastics, we insert the following further illustrations of a shorter and simpler course for the pupils of a common or grammar school:—

MEANS OF EXERCISE.—In the country school sections, where the play-ground is extensive, and suitable for the use of bats, balls, hoops, stilts, jumping sticks, &c., which the pupils will themselves furnish in abundance, it will render any special provision in this respect less necessary. But in case the grounds are small, and in towns where greater variety of means is required, additional arrangements should be made for such physical exercise as may secure proper muscular development.

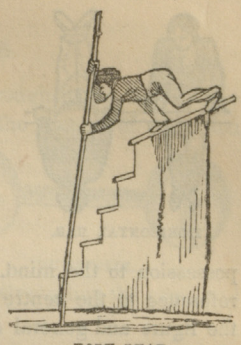
Amongst boys, running and leaping are favorite pastimes, and both are conducive to health. For running, no other preparation of the ground is needed than that there shall be space enough, and that the surface be sufficiently level to be safe.

Some kinds of leap require preparation. The long leap, along the surface of the ground, only needs a level space for the run, and ground not too hard for the leap



HIGH LEAP.

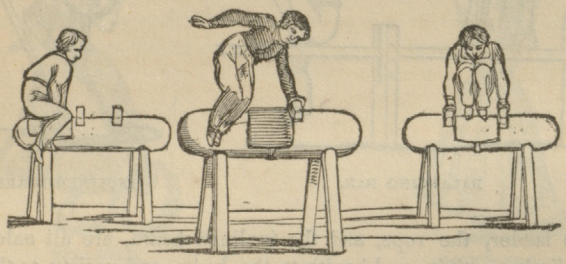
itself. The high leap may be made a useful and safe exercise by means of a proper leaping cord or bar, so constructed as to be elevated in proportion to the increase of the youth's activity by practice, yet so arranged as to prevent the injury by striking the feet against the cord or bar.



POLE LEAP.

The pole leap brings the muscles of the hands and arms into play as well as those of the lower limbs; and if it be cautiously practised and gradually increased, will give a degree of confidence and activity to the performer, which may be valuable to him in the dangerous and trying positions of after life.

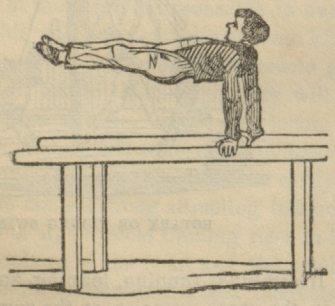
Vaulting is another kind of exercise which strengthens the muscles of both upper and lower limbs. The power to swing oneself over a fence too high for a leap, in



VAULTING.

times of danger or great haste, is desirable. Rapid and graceful mounting on horseback may also be thus taught. The necessary fixtures cost little and add to the variety of the play-ground.

The parallel bars are admirable contrivances to exercise and strengthen the arms, and open and expand the chest. If of different heights and sizes, they may be used by pupils of all ages. They possess the advantage of being perfectly free from the

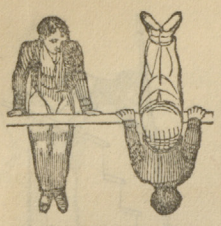


PARALLEL BARS.



PARALLEL BARS.

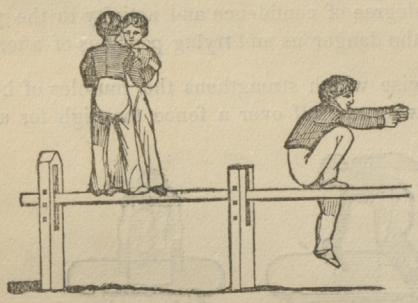
possibility of accident to the smallest boy who uses them; and should therefore be among the first means for exercise introduced upon the play-ground.



HORIZONTAL BAR.

The horizontal bar is for lads of more advanced age, and its use, besides strengthening the hands and arms, affords the opportunity of placing the body and limbs in a great variety of positions, and of thus strengthening many muscles not ordinarily called into action.

The balancing bar is so constructed as to admit of elevation from the ground in proportion to the pupils' confidence in himself and skill in using it. It is admirably fitted to give strength to the lower limbs, steadiness to the brain and self-possession to the mind. The constant practice of balancing the person with exact reference to the centre of gravity must also have a beneficial and graceful effect on the figure and general deportment.

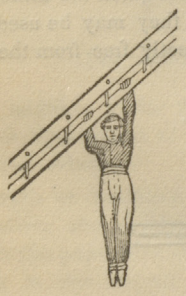


BALANCING BAR.



INCLINED BOARD.

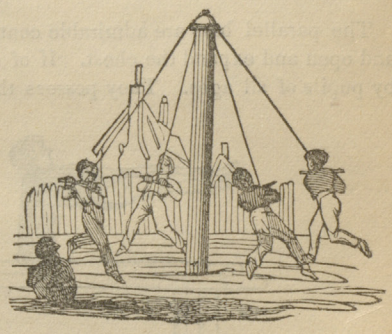
Climbing the ladder, the rope, and the inclined board, are all calculated to add strength to the limbs, activity and health to the body, and variety to the exercises of the play-ground. They can be provided for at slight expense, and be found, in common with other similar arrangements, to increase love school, by rendering it attractive. No gymnastic apparatus combines greater variety of healthful and pleasant



THE LADDER.



THE ROPE.

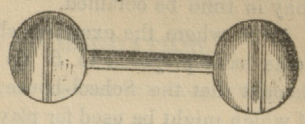


ROTARY OR FLYING SWING.

exercise than the rotary or flying swing. It combines running, leaping, and climbing, with the addition of engaging several in the same exercise at the same time. It also has the advantage, which few of the exercises which have been enumerated possess, of being equally adapted to females.

V. CALISTHENICS FOR GIRLS.

Though girls neither require the same robust exercise nor rough sports, to develope their frames and fit them for the duties of life, as boys, yet the system of education which omits or slightly provides for their physical training, is most radically defective. In addition to such of the apparatus already enumerated, and others proper for both sexes, those more peculiarly adapted to their wants should be provided. In this point of view, light dumb bells are best calculated, if properly used, to strengthen the arms and expand the chest.



DUMB-BELL.

The long back-board is also well calculated to expand the chest and give litheness and grace to all the movements of the arms and bust. The variety of attitude into



TRIANGLE.



BACKBOARD.

which its use can be made to throw the person, cannot but be beneficial. The triangle is a short bar of wood, attached by a light rope at each end, to one secured at some point of considerable height. This is so arranged, by means of a pulley, as to be adaptable to the size of the person using it, and is a simple contrivance which may be used in a shed or room, in bad weather, and made to answer most of the uses of the rotary swing.

In suggesting these or similar arrangements and apparatus for the amusement and physical training of youth of both sexes, of course it is not designed to assert that all or even any of them are indispensable to every school. It is admitted that children, in good health, will have exercise of some kind, and, if not restrained, will generally manage to secure a sufficiency to promote growth and vigor of body; but it is also known that, if left to themselves, they will generally neglect the studies proper for their intellectual culture. Hence the latter, with that of their moral nature, becomes the object of primary importance and obligation. But then, it is also believed that the means of physical exercise may also be vastly improved in nature and result, and at the same time be made a strong attracting influence in favor of the school and of learning. In this view of it, physical training rises in importance to a point only secondary to that of the culture of the heart and the intellect; and it may, therefore, not be overlooked without detriment to the best interests of the child and of society.

If it do not suit the convenience or the means of the Section, to expend money to provide for the physical training of its youth, by means of proper gymnastic arrangements, much may be effected by the teacher and the pupils. Timber is cheap, and there will be found in every school of the ordinary size, several scholars of

sufficient age, mechanical turn, and, if properly influenced, of willingness to labour for the common good. A Saturday or two devoted to this purpose, will readily produce one or more of the simpler kind of gymnastic apparatus, and the agreeable and beneficial effects of these will soon introduce others. In this way a full set may in time be obtained.

As to where the exercises shall take place in rainy weather, has been a question. Some have proposed to fit up and use the basement for the purpose; some have thought that the School-house should be constructed with two stories, the upper one of which might be used for play; and others have proposed separate covered buildings or sheds. Should such a use be made of the second story of the school building, the walls of the first story must be made thick and firmly bound together. They need not extend, however, higher than the first story, as the second should be open, but surrounded by a balustrade and pillars to support the roof. The floor ought to be laid with thick plank and deafened. More costly arrangements might be described, but these have both simplicity and cheapness to recommend them.

Should the price of ground in particular localities render it advisable to occupy a room in the school building, for gymnastic or calisthenic exercises, or to erect a building purposely, in which case alone such expedients should be resorted to as the sole means of exercise, the utmost care must be taken to ensure a full supply of pure air. No consideration ought to be permitted to interfere with this indispensable requisite.

KEEPING THE GROUNDS IN ORDER.—The Trustees in whom, in this Province, is vested the exclusive control of the school property of the District, should first project and erect school-buildings and arrange school-grounds; but after they are in order, they should be intrusted to the Teacher's care, and he should be made responsible for their abuse. It is considered his duty to keep a clean and tidy school-room, and he should be held equally responsible for the condition of the yard and its enclosure. It is true that the destructive propensities of children uncontrolled, often lead them to do mischief—to throw down the fences—to cut and bark the trees—to cover doors and furniture with uncouth and obscene figures; but it is emphatically the teacher's duty to prevent these acts, and no better proof need be desired of a Teacher's want of qualifications than his inability to do so. This propensity on the part of the young, to cut, scratch, deface and destroy school property, should be corrected. They do not thus misuse the property of their parents, and it is but mismanagement at school, that induces them to act differently there. Teachers may create such a spirit among their pupils, as not only to prevent them from doing harm to the school property, but to render them willing and ready to assist in protecting it from the trespasses of others. They can be taught to love neatness and order, to guard affectionately the trees and flowers about the school-grounds, and to take pride in their protection and preservation.

It would be a great convenience to have a spring of water in the yard, or a pump, from which cool, fresh water could be brought at all times; and this should be of such easy access that all might undergo those frequent ablutions so necessary to cleanliness, and upon which depend, to so great an extent, the good looks of school boys and school girls.

IMPROVING EXISTING SCHOOL-GROUNDS.—These grounds can be levelled and smoothed, and good enclosures be provided. They can be enlarged by the purchase of adjoining grounds; and in view of the probable increased future requirement of the Schools in this respect and the increasing value of land, good economy would dictate that there should be as little delay as possible in so doing. Shade trees can be

planted in all school-grounds, in which they do not at present exist. It will take them years to grow, and in the far future the little folks who shall then enjoy the comfort of their shade, will look back and thank those to whom they may be so much indebted.

VI. GYMNASTICS AS A BRANCH OF EDUCATION.

A LECTURE DELIVERED BEFORE THE UNITED ASSOCIATION OF ENGLISH SCHOOL-MASTERS, BY MR. G. REINICKE.

Man is a twofold being, consisting of a wonderful union of a physical and mental nature into an harmonious whole. From the time when it was acknowledged that our mental development was the true aim of our earthly existence, the physical development has too often been treated with too little importance. This neglect attained its highest pitch in the supposition, that the body was but a clog to the soul, and that in proportion as the body was neglected, the mind became improved. Locke was the first who opposed this view; he was followed by Rousseau. Though the view of the latter had too much of materialism in it, still he saw that the body is the habitation of the soul, and that bodily exercises must be an important part of education. And how bitter is the result of such neglect of the body, the Temple of God? What a fine example the old Greeks give us, who in noble cultivation outshone the whole world, so beautifully uniting the mental with the physical development. It is very right to free the soul from the bonds of the body, but not through carelessness and degeneracy, but through strengthening the same. And the human body is calculated for vigorous activity: only by much use and continued practice can the body attain and preserve the right standard of power.

All bodily exercises are not Gymnastics, according to the view which we take. We do not understand by that term irregular exercises of children and uncivilised tribes, national games or public exhibitions of bodily strength and agility. Gymnastics, *as a science*, consists of an *harmonious and methodical development of the body by exercises, considered both in relation bodily and to the intellectual faculties.*

We will first consider the influence of such gymnastics *upon the body.*

The first and most striking result is the *development of muscular power.* We all know that the muscles, without exercise, not only become powerless, but change both in form and substance, which is shown by reduction in size, and by softness and laxity. Continued inactivity converts them into a fatty substance; whereas, through much exercise the muscle grows larger and stronger, and even in a state of inaction attains a certain degree of firmness, which the unexercised muscle scarcely has during its contraction. The quality of the muscles is influenced by the reproduction and appropriation of new organic substances in the place of those, which through the process of existence are constantly consumed. They are the ground work of existence. Consequently the greater the vital power of the body, the greater will be the reproduction and circulation of the animal fluids. The comparatively great amount of nerves and blood vessels in the muscles is a proof of their qualification for a quick reproductive power, as well as of a high degree of vital activity. Hence the rapid growth of their substance by continued vigorous activity. A journey on foot of a few days even increases the size of the muscles of the lower extremities, particularly of the gastrocnemius; only a few hours fencing will be productive of a similar effect upon the upper extremities, particularly of the biceps. The absolute increase of the muscular substance is the cause of the change, as the greater flow of blood continually supplies fresh matter and completely replaces those parts, which have been consumed and carried away by the veins. As everything has its conditions and bounds, so also must the muscular development be circumscribed. Physical endurance, which is more than the result of quiet strength, can only be attained by long continued exercise.

A great number of gymnastic exercises only consist of certain movements, which have for their object the increase and maintenance of flexibility, particularly of the joints of the hand, the shoulder, the spine, the hips, the knees, and the feet. On the flexibility of these joints

agility depends. It exists naturally without exception in children and sickly persons. With the former consequently gymnastics does not require to produce, only to preserve. It is seldom found with such who have become strong by hard labour. This inflexibility of joints is caused by the ligaments and sinews, which through insufficient use have been suffered to lose their elasticity. Great flexibility often prevents serious results from falls or collision by the quick evasion of the danger. It is scarcely credible what agility can do to prevent the fracture of a limb. Experience teaches us daily that awkwardness is too often the cause of accidents. Muscular power and agility combined give the body firmness and decision in the use of the limbs, both producing a firm and noble bearing. It is a great error to develope one arm more than the other, which was censured as early as Plato. It is therefore one of the objects of gymnastics, that the left and right side shall receive equal power and skill. It will be seen from this that the end of gymnastics is not simply coarse strength.

Above all things the many arm movements as well as the slow and deep breathing produce a healthy expansion and development of the chest. This is of course followed by a freer and more perfect development and action of the organs therein contained, the heart and particularly the lungs. Every one who is acquainted with the process of respiration will easily see how important the latter is for the whole of the vital process. By the usual movements, walking, &c., we do not take a full breath; the chest consequently does not attain its full expansion, and the air inhaled only partly fills the lungs. Those parts of the lungs not brought into action remain collapsed, lose their spongy elasticity, and in course of time their capability of being penetrated by the air. The blood, which flows copiously to the lungs, becomes more or less stagnant, the lungs are inflamed, and at length consumption is the necessary result of this partial inactivity.

All dissectors agree that perfect lungs are very rare.

Gymnastics is a preventative of *corpulence*, which is always a sign of weakness. We find such in females, after repeated bleeding, in wine and spirit drinkers, from weak digestion, diseases of the liver, from want of exercise, from too great proportion of nutritive food, old age, and in sanguine and phlegmatic temperaments. Corpulence is certainly a defect, something abnormal, unhealthy, and extremely burthensome. It is most unnatural in youth. With mathmematical certainty powerful muscular exercises will prevent this evil. How different the body which has been practised in gymnastic exercises will prevent this evil. How different the body which has been practised in gymnastics from the one which has not. Certainly the body loses through gymnastics all female beauty and softness; but it gains a true manly beauty, on which every muscle in action is distinctly marked, as in the Laocoon and Apollo.

Further, Gymnastics has great *influence on the skin*. The contrast between a man who has grown up in active and laborious bodily exercise, and a youth or man educated in enervating habits shows this plainly enough. The former is adorned with a brownish firm skin, his marked features are signs of manhood and firmness; the skin of the latter is, on the contrary white, transparent, the feminine forms of the face and body give everywhere the impression of weakness. Manly beauty makes not only a certain solidity of the skin desirable, it is also the surest means of preventing the external influences of heat, cold and rapid changes of the same. The skin perspires more freely by stronger motion, the danger of catching cold is therefore greater. The evil increases more and more the greater the careful protection from the air, and the unfortunate sufferer becomes at last so sensitive to all external influences, that he feels in a terrible manner every change of the atmosphere, like a living weather glass. Hufeland relates, that he has known learned men whose skin had become so painfully sensitive, that they could tell with great certainty in their study, when in clear weather a cloud passed their zenith. And the sensibility of the skin is only an evidence of the general morbid irritability of the nervous system.

History shows us on every page, that culture only makes people happy to a certain point, and that beyond this they sink faster or slower towards their destruction." In the bloom of prosperity," says Von Konen, "the seed of destruction is generated with the satisfaction of the desires, the refinement increases, the frivolity of wit and the epicurean taste for sensual pleasures destroys moral dignity, energy of mind, separates individuals from society, which

finds its destruction in egotism, in bodily, and still more in mental weakness, and in intractable degeneracy. The more pressing is the necessity of restoring the only means which is able to reproduce the smouldering power of all civilised nations. And through filling up the gap in pedagogical science we would impart to the young a stability which would withstand many of the poisoned darts of luxury."

The only communicator between soul and body is the nervous system, the heart of which may be called the brain. The latter is consequently that part of the body which suffers more directly from the evil results of excessive mental exertion. Every one has doubtless felt the truth, as he will have experienced after close and continued thinking a feeling of exhaustion and slight oppression in the head. Here the common law in all organic nature is applicable, that, where the irritation is greater, the circulation of the blood is stronger and the secretion more profuse. Heat in the head, tendency to inflammation, suppuration and obduration of the brain, hydrocephalus, epilepsy, catalepsy, somnolency, and sleeplessness are the sufferings which afflict the learned. If we consider the far greater sensibility of the child and youth, and the natural tendency of the fluids to the brain, it is easy to understand how premature development of the mind often destroys health and life. How often we hear parents say after the loss of a child, "it was an angel too good, too clever for this life," without thinking that they had allowed themselves from its natural quickness of comprehension to overtax its mental powers, and that they are the indirect cause of its death.

Excessive mental exertion, particularly in youth, often cripples mental power. Montaigne says, "How many men have I seen become stupid through too great a thirst for knowledge. Not seldom are those cases where youths, who were the pride and the pleasure of their parents and tutors in their 10th or 15th year, in their 20th year are surpassed by others of their own age, and they often become quite unfit for thinking. We must not from the above draw the conclusion that the cultivation of the intellect is to be restrained as being detrimental to the health and vigour of a nation, and that it does not deserve the greatest care and attention. There is perhaps no greater or more inexpiable crime against the welfare and happiness of our fellow beings and those committed to our care, than with despotic power and inhuman barbarity to mark out the bounds, thus far and no farther. "It is true, that the poor systematically oppressed and kept in ignorance," says Wieland, "grow gradually to stupidity, and the sensual inclinations, which grow with their years, not having learned to obey any law, give rise to a number of prejudices and errors, which smother the power of discriminating between good and evil, that prerogative of human nature. They never will become matured to true beings."

We should exercise and educate the mind in every way and to the full extent of its power, but only at the right time, and in the right degree. In gymnastics we find the only regulator. It prevents, by strengthening the muscles, the irritability of the nerves, which is almost without exception combined with weakness of the muscles. Gymnastics search out the ordinary external causes of the illness, as heat, cold, and the sudden changes of the same, rain, want of sleep and food, and teaches us to bear them with caution and safety. I have often noticed in my pedestrian tours, that even delicate boys, wet with rain to the skin, notwithstanding their wet clothes, have gone cheerfully on their way, have gone at night to their often simple couch, and risen early in the morning well and brisk.

Man acquires the highest degree of his physical perfection only when a higher degree of power and resistance is combined with the sensibility and mobility of the nervous system. Without having a great physiognomic knowledge, we perceive at the first glance such a constitution. "What a difference," says Niemeyer, "between children always tied to their mother's apron string, protected from every breath of air, warned against every bold exertion of their bodily strength as a great danger or even sin, and those who from their infancy developed their limbs by all kinds of exercise, and by that means defy every real danger or learn to make it harmless. The great danger to which the unpractised, awkward, anxiously guarded boy is exposed, and the privation of all the irreparable advantages, which produce strength and agility of the body, plainly show how unpardonable it is so much to neglect this part of bodily education."

It is true, that the improvement of the health will produce a normal motion and mixture of

the blood, but the more violent motions of the body have influence on the rest of the body, and sedentary habits produce a disproportion between the venous and arterial blood. The veins, even of the external skin, will rarely be found expanded, while blood is wanting in the arteries. If one considers that the arterial blood only is of service for support, it is easy to understand, how too great a quantity of venous blood deranges the whole system. This disproportion is mostly the cause of the legion of diseases of the bowels, by which the nervous system is most developed. If we farther consider that the conversion of the venous blood into arterial, is caused through the process of respiration, and if we remember, that the most perceptible result of a continued and vigorous exertion of the body is the increased rapidity in the circulation of the blood and action of the lungs, it will be easily understood, that for them bodily exercise is the only comfort, and that through it in a few hours a refreshing and invigorating feeling of health is produced. Pressing is therefore the appeal to every one, to prevent this unhealthy state by regularly continued exercise of the body. We should certainly never find in one who had been trained from his youth in gymnastics, even frequent and difficult work of mind, producing hypochondria, hemorrhoids, liver-complaints, and the like, the true cross of our learned men. Addison says, "Gymnastics open the chest, exercises the limbs, and gives a man all the pleasure of boxing, without the blows. I could wish, that several learned men would lay out that time which they employ in controversies and disputes about nothing in this method of fighting with their own shadows. It might conduce very much to evaporate the spleen which makes them uneasy to the public as well as to themselves."

Gymnastics is also of beneficial influence to the *digestion*, it keeps the balance between nourishment and consumption; thus the necessity of rest and recreation will be greater, the sleep sounder, more refreshing, and therefore shorter.

Our senses, from being the communications between the mind and the external world, form the basis of all mental development and improvement. By the loss of one of the senses, all ideas and conceptions which are conveyed through the same are wanting. We can, for instance, give the blind no idea of the beauty of a picture or landscape, and the deaf no delight in music. This already shows how unnatural it is, and what a want of judgment, to torture the children exclusively with dogmas and exercises of the memory. There is but one way of teaching a child, that is, to take care for the variety, strictness, and clearness of the perceptions. All questions put by the child show the desire to bring his own feeling to the right clearness. Formation of notions and combination naturally follow, and it is certainly better to bring the child to an abstract truth through his own reflection than to make it at length intelligible to the memory through long sermons. It is therefore, that the more frequent sojourn of the tutor with the children in the open air, where he can call attention to surrounding objects, is of such unspeakable value. The bodily organs of the senses can be refined and improved by practice. Gymnastics is here able to do something. The uninterrupted application to indoor study is in a great measure an important reason for short-sightedness; therefore it is easy to see, that through continued employment of the eyes on near objects the power of discerning distant objects is destroyed. And we see with sorrow that the weakness of the eyes prevalent with the learned begins in the years of youth, or even boyhood. The interruption of the aplication to near objects is already a great benefit to gymnastics, but it also by many exercises practises the eyes. For instance, in calculating the distances for jumping, through many vaulting exercises and particularly in fencing, where the eye not only follows the quickest movements of the foil or sword, and with readiness perceives a momentary exposure, but even reads in the eyes of the opponent the intended thrusts and blows. The ear will be practised in many gymnastic games, for instance, in blind man's buff, where the eyes being covered, the ears are the only guides. The refinement of the taste and the smell, senses which can be more easily dispensed with, can certainly not be much aided by gymnastics, luxury does in this case more then we wish. The development of the sense of touch, lastly, must be left more to domestic education. The mechanical part of music, drawing and so on, are here the best tutors, It may however be mentioned that gymnastics does not deserve the reproach that it destroys the delicacy of the hand movements. As a proof of this may be

stated, that Gymnastic Clubs of the Continent always count among their members painters, sculptors, musicians, etc., many of whom are good gymnasts, as well as clever artists.

Be mindful therefore, to preserve to your children a sound body. Bodily weakness and mental depression are otherwise the product which you send into the world, instead of heathy children, both in mind and body, who salute life with joy and happiness. Do you attend to the health of body at the same time that you are educating the mind, the latter will comprehend more acutely, more powerfully, and quicker, and will attain the greatest power and energy in youth and manhood.

A few words of Cleveland may close the consideration how gymnastics act on the body. He says in his excellent essay on the classical education of boys, " First of all, I would recommend those exercises which strengthen the frame systematically, as gymnastics of every kind. I am aware that these are in use among us, but they are rarely insisted on as a duty, children are left to their inclinaton, and this is a country where the excessive heat in summer and cold in winter induce the want of energy and inactivity. I wish that an hour a day might be set apart, and rigidly kept for these exercises. The result of such an education is truly astonishing. . . . . It is melancholy indeed in our institutions for learning, especially our colleges, to see so many puny looking young men; hollow cheeks, round shoulders, and bending body are characteristics of our students, and premature old age, or consumption, carries off too many of our most gifted men. "

It will, perhaps, at first sight appear curious, that gymnastics secondly, would have a *beneficial influence on the mind.* There exists between mind and body a communion. We find everywhere the proof how the body works on the mind, and the mind on the body; the development and the healthy state of the body must consequently facilitate the development of the mind. " It is not a soul, not a body which we shall educate, it is a man of whom we must not make two, " says Montaigne. And do we not know how an exercised mind influences involuntarily the muscles of the body, the circulation of the blood, the organs of respiration, in short, the whole physical structure? Do we not find that vexation and anger affect the liver and upset the stomach, and that shame brings the blood to the face? Sorrow and affliction find vent in tears; the lungs, the windpipe, the diaphragm are affected by sighing, crying, and sobbing; enthusiasm and animation contract the muscles, and quicken the circulation of the blood, whereas on the contrary, terror and fear convulse, and produce involuntary ejaculation.

Gymnastics is, in the first place, a powerful antidote to inattention or absence of mind, which is a clog to all moral and intellectual advancement. Every movement and every exercise requires the full attention of the pupil. He cannot execute a leap, a movement, or turn of the body, a game or contest, without giving it his full attention. He must be perfect master of every movement, estimate distances, calculate the mode and speed in which each limb must be moved, or he cannot succeed. Niemeyer is right when he says, " that the gymnast shows his perfectness when he can with the greatest coolness use every power of the body for some definitely given object, and in making use of every advantage, execute apparent impossibilities through gradually won dexterity. As long as he does not give full attention to what he is doing, he is in danger." What force and vivacity there is in the face of a physically well-trained youth, all his movements, his whole face expresses so plainly the activity of the mind, and its attention to all that is passing.

Again, gymnastics is the finest school for *courage.* Courage has many sources. Habit, and the repeated occurrence of a danger produces it, another sort owes its existence to animation enthusiasm, and intoxication. These, however, cannot be the object of education, the one from its being restricted to certain actions, the other from its bursting like a bubble, and doing more harm than good. Real courage faces danger with coolness, consciousness, and in knowledge of its strength, either from a sense of duty, or because the danger cannot be evaded. Gymnastics produces this courage by strengthening the muscles, through its certain decision and quickness of the movements. It is one of the greatest pleasures of the gymnast, to feel himself in difficulties, which he is able to overcome by consciousness of his strength and agility. It seldom requires a foreign impulse to urge him on; on the contrary, it is one of the most difficult and important tasks of the teacher, to keep his pupils within bounds. Gymnastics

is another and rich source of courage, as it teaches the endurance of hardship, pain, and fatigue; every exertion seems to bring fresh strength. How very deficient on this point is our education, how difficult is it for the teacher to overcome the fear, and misdirected love of the parents. The child has a desire to make gymnastic exercises of his own, such as running, jumping; but these might be dangerous. "Walk very slowly, or you may fall and kill yourself, and then we shall have no little Fred left," are the admonishing words of the anxious mother. The little prisoner sees the other children running about, jumping and playing, he wants to join them, but he is told they are unruly and naughty children, they will mislead the little son, knock him down, and teach him bad manners. The desire for freedom becomes stronger and stronger, he becomes untractable, the mother can hardly bear it any longer: when at length a haven of rest is opened—the school; and in a short time the wild, untractable boy has become docile and quiet, and not seldom surly, indolent, and dreamy; and thus his life passes without the enjoyment of the most beautiful years, those of childhood, in mirth and innocence, the remembrance of which remains and enlivens the eye of the youth and man.

Gutsmuth strikingly describes such an education with the following words: "At home, anxious injunctions repeated a thousand times, and in the school great circumspection, great attention, avoidance of danger, even where none is to be found. Everywhere a rigid and strict depression of natural courage from childhood upwards. Taming! taming! is the watchword!"

Farther, gymnastics is a means of promoting courage by expanding the chest and giving vigor to the lungs. Too much study makes the student weakly and deadens the vital powers, and it is with difficulty that the mind retains vigor, when the body has lost it. Study exhausts the animal spirits, and is an antidote to courage. We find with weakening courage a visible expansion of the chest, while on the contrary, if it is contracted, it is unable to participate in the same degree of emotion.

The desire for bodily exercise is so strong in healthy boys that any effort to suppress it only tends to heighten the same; it is, consequently, only reasonable that we should provide for its regular development. The correct estimate of their strength is to be obtained by boys through repeated exercise under proper direction. Experience has shown me that none are more foolhardy than novices in gymnastics; whereas the elder pupils will never over-estimate their strength.

Again, gymnastics is conducive to *hilarity and buoyancy of spirits.* What is more pleasing in youth, than that cheerfulness which is the warrant of so many good qualities? The straight jacket of schools often deadens these expressions of bodily and mental health; but gymnastics, from its healthy influence on the body, and with its quick and dexterous movements, accelerates the same. As Tristam Shandy says, "So much more exercise, so much the more health and happiness; but idleness and inactivity, certain death." Sometimes the mere sight of the cheerful exercises of the gymnastic ground cheers up and diverts the spectator to such a degree, that he feels all the vivacity of youth, and he will not seldom throw off his coat, join in with the rest, and work away as if his life depended on it.

That gymnastics *prepares the mind for scientific study,* may easily be conceived from what has gone before. What can be a more efficient preparation for the reception of knowledge than a healthy condition of the body and mind? The healthy state in which the body is kept avoids the retrograde movements often produced by illness. Hippocrates says, "The strength of the mind increases with that of the body. When the body is diseased, the thoughts are distracted."

Sterne says, "Oh, blissful health, thou art worth more than all the money and treasures in the world: through thee the mind expands and puts in motion all its powers to receive instruction and love virtue; he who possesses you has little more to wish for; but he who is unfortunate enough to lack you, lacks all with you."

The most striking side of gymnastic education is the development and exercise of *activity.* It is true, that the characterless also have good intentions to improvement and to good actions, but they disappear like *ignes fatui*, after having flickered for a short time.

The social and simple nature of gymnastics, and the *simplicity of dress required,* do much to

destroy that conceit and self-esteem which the imaginary advantages of money, birth, and standing, are apt to give.

Gymnastics is, in many respects, a fruitful source of *friendship*, in the form of a self-denying, open disposition,—for the mere friendship of words is not worth much. The physically healthy man thinks less of self; in him the feeling of public utility and self-abnegation is most developed, one finds, consequently, in the working, strong, lower classes, a lively participation in the good or bad fortune of others, much more than in enervated members of the upper classes.

A well-arranged gymnastic ground gives, further, the means and *opportunity of teaching* a proper degree of *obedience*, for it is absolutely necessary, that when a number are working together, they must obey the one in command, and this is readily done, as they are all aware that nothing can be done if they do not submit to the rules and regulations.

VII. THE SCHOOL ROOM, ITS DISCIPLINE AND MANAGEMENT.

REPROVE GENTLY.

He who checks a child with terror,
  Stops its play and stills its song,
Not alone commits an error,
  But a grievous moral wrong.

Would you stop the flowing river,
  Thinking it would cease to flow?
Onward must it flow for ever—
  Better teach it where to go.

I. DISCIPLINE IN SCHOOLS.

In reply to many inquiries addressed to the Educational Department on the subject of Discipline in Schools, we insert the following extracts from the Law and Regulations on the subject.

The second clause of the sixteenth section of the School Act of 1850, makes it the duty of every teacher of a Common School * * * "To maintain proper order and discipline in the School, according to the forms and regulations which shall be provided according to law." These regulations make it the duty of the teacher

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7. "To evince a regard for the improvement and general welfare of his pupils, to treat them with kindness combined with firmness; and to aim at governing them by their affections and reason, rather than by harshness and severity.

8. "To cultivate kindly and affectionate feelings among his pupils; to discountenance quarrelling, cruelty to animals, and every approach to vice.

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10. "To practice such discipline in his school as would be exercised by a judicious parent in his family; avoiding corporal punishment, except when it shall appear to him to be imperatively necessary; and in all such cases he shall keep a record of the offences and punishments, for the inspection of the trustees, at or before the next public examination, when said record shall be destroyed.

11. "For gross misconduct, or a violent or wilful opposition to his authority, the master may suspend a pupil from attending at the school, forthwith informing the parent or guardian of the fact, and the reason of it, and communicating the same to the trustees, through the chairman or secretary. But no pupil shall be expelled without the authority of the trustees.

12. "When the example of any pupil is very hurtful to the school, and in all cases where reformation appears hopeless, it shall be the duty of the master, with the approbation of the trustees, to expel such pupil from the school. But any pupil under the

public censure, who shall express to the master his regret for such course of conduct, as openly and as explicitly as the case may require, shall, with the approbation of the trustees and master, be re-admitted to the school."

"The discipline of the school, and therefore the authority of the teacher, extends to all pupils from the time they leave their parents and guardians until their return to them. Pupils are as responsible to the authority of the school for wrongs they do their fellow pupils, or other improprieties they commit, on their way to and from school, as if they did such things on the school premises, or in the school. If pupils were not responsible to the school authorities for their conduct going to and from school, endless irregularities might be committed with impunity by pupils, neighbour would be set against neighbour by the alleged improprieties of each others' children, and school discipline could not be maintained. Of course the responsibility of a teacher is as extensive as his authority."

These regulations apply alike to Grammar and Common Schools; and are sufficiently explicit to make teachers effectively to perform a delicate and difficult duty.

NOTE.—The following articles on the School-Room, its Discipline and Management, have been selected from successive volumes of the *Journal of Education* for Upper Canada, and from other sources. They contain suggestions and hints on almost every subject connected with the daily routine of school duty.

II. THE THEORY OF SCHOOL GOVERNMENT ANALYSED.

In order to become a moral trainer, the first step a teacher must take is to see what are the present expedients of his school government. Does he rule his little empire by the law of love or of fear? Does he secure order, obedience, and industry, by infusing the spirit of work from a lawful desire to please others, or honest love of approbation, and for the principle of duty; or does he force results, if not by a rod of iron, by the rod of hard and elastic wood? I am no advocate for weak discipline, properly so called; but I do not call *that* discipline which subdues the spirit of a child, instead of forming his pliant character. There are a thousand arguments against the rod. It is a very easy expedient—an irresistible argument—which the worst master who has but a man's strength can employ. I cannot but think, however, that it is occasionally placed upon the wrong pair of shoulders, when I see a boy punished for indolence or indifference, for which the want of tact and skill in the master is alone to be blamed. The master cannot interest his class—the boy is inattentive. The master is the cause, the boy is the effect; the effect is punished, and the cause escapes. Depend upon it that the teacher who avails himself of all the moral means of discipline which he could find, if he only looked for them where they are to be found—in the sympathies of our common nature—will produce a better condition of discipline, and with far less trouble to himself. School government built upon these sympathies, and backed by public opinion, will be far safer, far pleasanter, and far more productive of fruits, than one enforced by violence and fear. I know that it may be said that universal practice seems to show that the rod must have had its origin in some principle of our nature. This argument I grant; but that principle may be the unfitness and the inertness of the master's nature, and not the want of response to a higher appeal, which will be found in the boy's nature, until it has perished for want of exercise. An ignorant man, and an unskilful man, of whom accident, and not nature or cultivation, has made a schoolmaster, will find opposed to him the whole sympathy—the public opinion—of his scholars, and he has no alternative but rebellion or the use of his wooden rod; and, as in all stimulus, the dose must be increased, he

has no limit to the extent of the employment of it, until a boy too big or too brave for him shall measure his animal strength with his own. There are innumerable objections to the indiscriminate use of this weapon at least, if not its use altogether.—(1) It is seldom applied without passion. (2) A blow inflicted, if it afterwards be proved in error, cannot be recalled. (3) It takes no cognizance of the temper or animus of the culprit. (4) It draws out a direct and hating antagonism among the children. (5) A fault so punished is regarded by the culprit as expiated as soon as the atonement is made. (6) It hardens the sensibilities of a boy's moral nature. Corporal punishment, when anything good is left in a boy, breeds a reckless temper that defies the pain in the bold, and tends to press and to extinguish that becoming self-esteem, and spoils the very spirit of the more gentle boy. As war is the last appeal of kings, death is the last appeal of the law, so the rod should be that of the school-master. I know, as well as any one here, that there must be punishment; but it should consist in the moral sense of disgrace, and not in the animal sense of pain. What a bad master calls a bad boy, may be the bravest and finest boy in the school. The master has never courted his affections, or challenged his confidence, and now he despises pain without flinching, for it is the price at which he buys the secret admiration and the sympathy of all his peers. If a master would secure a high state of discipline without the rod, he must begin to organize the school better, to prepare lessons of deeper interest, and adapt them to boy-nature more skilfully—he must claim their sympathies, condescend to play with them, to become a boy with a boy, a child with a child—he must listen to their tales of woe—every school has its own laws of morality—he must be himself an invisible party to their fabrication—he must seek to secure public opinion, or what is called the "sympathy of numbers" on his side, and then the stoutest heart of his most obdurate boy, robbed of the admiration of his equals, will not need his strong arm any more, he will wince before the very look of his displeasure. Severity either begets defiance, or it begets terror. If defiance, the whole discipline fails, unless you can pass from rods to scorpions, and from scorpions to thumb screws. If it begets terror, terror will take its coward refuge in cunning or falsehood; and, as all the blossoms of nobility of character drop off one by one, instead of a man, you have made a very slave of a boy. We have tried the rod long enough, and if a voice from our prisons—if a voice from our reformatories—tells us that the words of human kindness alone can touch a string, the only string left that will vibrate within the broken instrument of an outcast's heart, surely we are doing a crying injustice to our comparatively innocent children whose natures are not utterly unstrung. Last winter, I wandered into the Sessions House in Hull, and I witnessed the trial of a boy of tender years. The Recorder was affected with emotion when he found that he was a hardened and oft-condemned criminal, though young. He had behaved throughout his trial with the most sullen indifference. In passing sentence, the Recorder followed a new track. "My boy," he said, "I can find none to say a word for you, but *I* can pity you from my heart; you even know not who your father is, and your other unnatural parent deserted you while a child; you have had no friend to guard you, no monitor to warn you; you have never known a tender mother's love, and were never taught by her to think of God and to pray to Him." The boy, who could hear of former committals and endless thefts without an emotion, began to lower his head when the Recorder used the first tone of compassion; lower and lower it went; but at the name of mother—though one worth the name of mother he had never known—the dry channels of his eyes became filled, until at last the boy sobbed as if his heart would break for the very unwontedness of his emotions. So taught the Saviour of mankind the outcast, the publican, and the sinner, and shall we fall back upon terror and fear with the tender children of our daily schools?

III. OBJECTIONS TO CORPORAL PUNISHMENT IN SCHOOLS.

It is a striking fact that, for upwards of two thousand years, all the illustrious promoters and reformers of education have strongly deprecated Corporal Punishment. It is true, in Sparta, the Pædonomos, or master, was always followed by the Mastigophoroi, or lash bearers,—these latter being selected from young men, and charged with the castigation of the offenders of the various classes. In refined Athens, however, school discipline seems to have been very mild ;—in the period after Alexander, so mild, that the sophist philologer was decried as a man of extraordinary violence, because—a thing unheard of before!—he had awakened by a blow one of his sleeping pupils.

In Rome, discipline was for a considerable time very severe. The *ferula*, or rod, was the usual instrument of chastisement with which children, in inferior schools, were beaten on their hands. The *flagellum* was more rarely used, and almost only against *slaves*. But the more civilization and true humane principles spread among the Romans, the more the application of Corporal Punishment was opposed by powerful voices. Quinctilianus and Plutarch, the oracles of educational wisdom in their age, have put forth in this respect opinions which are well worth quoting here more amply.

Opinion of *Quinctilianus* (l. I. c. 4.):—

"There is one thing I cannot patiently bear, although custom authorises it, that is—to whip children. This chastisement appears to me low and servile; and certainly, at another age, it would be a cruel outrage. Moreover, an ill-natured child, that is not touched by censure and reproof, will soon be hardened by blows, like the vilest slave .....If you have no other means of reducing a child to obedience, what shall you do when your pupil is grown up? For then he has nothing more to fear in this direction, and yet he will enter upon a career far more difficult."

Opinion of *Plutarch* (de Puerorum Educat.):—

"One ought to induce children to do their duty, not by cruel and humiliating punishment, which is more proper for slaves than for freemen, but by mildness and persuasion. Bad treatment renders them obstinate, stupifies them, and converts to them study into an object of horror."

To these opinions I add that of *Terence* (Adelphi, Act. I. Sc. 2.):—

"In my opinion it is a woful mistake, to believe that authority, supported by fear, is more solid and more durable than that founded on esteem....He who does his duty, only forced by chastisement, keeps to his work only so long as he believes himself to be observed; as soon as he thinks himself out of the reach of observation, he returns to his old inclination. He, whom you attach by acts of kindness, fulfils his duties heartily. He endeavours to show his gratitude for your tenderness; and whether you be present or absent, he will be the same. It becomes a father to accustom his son to behave well, more from his own impulse than from fear for another....He who is not able to bring about such a result should avow that he does not know how to govern children."

Quinctilianus, Plutarch, and Terence, assuredly never thought that so many centuries afterwards, their noble and generous views would be quoted against a system which they had to combat in their days.

During the dark epoch of the middle ages, and the period immediately following them, Corporal Punishment became once more the rule. The barbarian principle of those times, that human nature is radically wicked, greatly contributed to keep this mode of correcting in practice.

Luther relates how he and his fellow pupils trembled when their master spoke to them. His words seemed to them always pregnant with blows.

Erasmus (De pueris stat. et liberal. instit.) expresses his feelings on the school discipline of his times in the following rather strong words:—

"Now imagine, worthy Sir, how many of the most splendid talents are destroyed by these executioners, who, themselves uncultivated, are yet puffed up with the conceit of their learning. These morose, violent, abominable men deal out blows even for their mere pleasure, for they are of such a mean character that it is a sport to them to torment others. This kind of men ought to be butchers and flayers, but not the tutors of youth. And certainly nobody torments boys in a more cruel manner than those who possess nothing that can enlarge the knowledge of the pupil. Of course what else should such men do in the school, but pass the day in beating and scolding?"

Montaigne describes, in his Essays, a School of his time in the following words:—

"Approach the threshold of a schoolroom, and you hear nothing but cries of tortured children, and of masters excited with rage. What an idea, to awaken in those tender and timid creatures delight for their lessons by means of brutal force! Away with this pernicious and damnable theory of the rod!"

The modern Reformers in Education on the Continent everywhere substitute for the method of teaching with cane and rod, the more scientific, and at the same time more humane, methods of correction. Corporal Punishment is strictly prohibited in the schools of France, as well as in the greater part of Germany. Even in the few districts of Germany, where it still exists (although it is rarely applied, and never against pupils above the age of fourteen), the public feeling is much opposed to the practice.

The schools in these countries are very large: nevertheless discipline is strict and effectual,—even more effectual than in English schools, notwithstanding the more turbulent and excitable temper of French boys. It may also not be amiss to remark that, both in France and Germany, the master is not only more esteemed by society in general, but also more loved and respected by his pupils; and this their feeling of respect is genuine—not influenced by the cane.

I do not think that, in such schools as Eton, and with almost grown up youths, Corporal Punishment is used in any part of Europe, nor even in Russia. But in England also it becomes more and more rare, and will at length disappear with another torture, with which it is intimately connected, viz., with the terrible art of cramming, of which a French author says,—"If I think of the manner I was taught, it seems to me that they put my head into a bag, and made me march by means of the rod, chastising me whenever I did not see my way." There are at present many excellent schools in England where the cane is never used; however, they bear out triumphantly any comparison with other educational establishments.

I trust the time will come at last when England is to give up a practise more Chinese than English in its character. China, in fact, may boast of using the bamboo, not only as the great mainstay of government, but also as the prop of the educational system. The Chinese pupil who does not know his lesson, is placed on a small bench, and receives from eight to ten blows with the stick. This procedure is very frequent. The graduates have the privilege of being whipped, not by the public Mandarins, but by special ones, who have the rank of their masters. Often at an examination, when both the father and the son contend for office, the former receives Corporal Punishment as a corrective of his ignorance, whilst the latter, the son, is rewarded. There is equality before the bamboo, no partiality being shown to class, rank, or age; and we must give the Chinese the credit of being consequent.

After having thus described, in a few words, the use of this kind of punishment of

by-gone times, and the esteem in which it stands among the principal nations of Europe, allow me to allude briefly to another point, of paramount importance, and without which this communication would be very incomplete—I mean the *effect of the whip on health and morality*.

Is Corporal Punishment injurious to health? To this question I boldly answer that, in certain cases, it becomes even a danger to life, if the person who undergoes it suffers from disease, or a disposition to disease, or if the blows are given on those parts of the body which cover important organs, such as the head, the back, &c. It is on account of these reasons that persons condemned to the lash or cane in those countries where this kind of punishment is still flourishing, are always previously examined by a member of the medical profession.

But even if Corporal Punishment is used with care and precaution what is its general effect on the health of children?

Every student of Hygienic science knows that the brain of children—the seat of the moral and intellectual faculties—is of the most delicate structure, subject to numerous morbid influences, upon the presence or absence of which their future happiness often depends. Unfortunately, the existence of these influences has hitherto but too frequently been ignored. If a child ate, drank, slept, and played, but had no desire of learning or exhibited a wrong moral disposition, he was never supposed to suffer from a disease, never thought of being treated accordingly, but only corrected with the cane and rod, often to the entire perdition of his character and faculties. I consider this a shame to our enlightened age.

The cause of most of the diseases is irritation on a certain point. For the brain, such causes are the most numerous, comprehending, as they do, not only physical, but also intellectual and moral irritations. Among the intellectual irritations we must rank all excessive work of the brain, all disgusting work, such as cramming, &c., which deeply affects the organ of the intellect, sometimes paralyzes it. On this point *Tissot*, in his work *de la Santé des Gens de Lettres*, says,—"I have seen children, who gave the greatest hope of progress, forced by hard and imprudent masters to excessive intellectual labour, and the consequence was—epilepsy for a lifetime."

Moral affections of the brain are produced by painful, cruel, disgraceful, and unjust acts, such as Corporal Punishment, especially blows on the head. Such irritations excite the brain and affect the organ of moral faculties. Continual irritations of this kind often ruin a child. Beating and violence render him cowardly, stubborn, and servile, awakening in him hatred, horror, and disgust, both against the master, whom he regards as nothing better than a gaoler, and against the school, which he abhors as a prison. If he does what is required from him, he does it by fear. His sense of honour becomes weakened, and instead of having his heart filled with frankness, he becomes a hypocrite.

It is true, that in schools good order can only be maintained by a certain severity. This severity ought, however, to be kept within such reasonable limits as not to render study an object of nauseous aversion. In punishments, as *Montesquieu* says, we ought to follow nature, which has given to man the sense of *shame* as his greatest chastisement; and the bitterest part of punishment is the moral pain that is caused by this delicate sense. Violence and force, whether in acts or words, injures the education of a child, who is to be raised to honour and liberty: it is contrary to the real object of education, which is to awaken in children the softer feelings, and to induce them to the acquisition of wisdom and virtue. That which cannot be done by reason, prudence, and skill, is never done by force. Confidence, esteem, and friendship, are the best inducements to study, and these are not afforded by brutal, but by moral

force. A firm, and at the same time benevolent master, is never obliged to employ his muscular power. The only means to have good pupils is to make them love study. "If you love study, you become learned," says Isocrates, who differs in this respect from the author of the article on Corporal punishment in your last number, who says, "unbirched Bishops will be knownothings."

These, are my views on the use of the cane. I have quoted in support of them a number of respected names, of the classic as well as of the middle and the modern ages. I should have wished to treat more amply the question, what sort of punishment may be substituted for the whip, which I deprecate; but I have already so much trespassed on your liberality that I can only refer, for the question alluded to, to numerous works of modern Reformers of Education.—CHARLES SCHAIBLE, Ph. D.

[We advocate Corporal Punishment in Schools as a *remedy*, not as an *usage*, which Dr. Schaible justly condemns.—Ed.]

IV. SCHOOL JURISPRUDENCE.

The Old Schoolmaster's Story.

"When I taught school," said he, I adopted it as a principle to give as few rules to my scholars as possible. I had, however, one standing rule, which was, "Strive under all circumstances to do right," and the text of right, under all circumstances, was the GOLDEN RULE. "All things whatsoever ye would that men should do to you do ye even so to them."

If an offence was committed, it was my invariable practice to ask 'was it right?' 'Was it doing as you would be done by?'

All my experience and observation have convinced me that no act of a pupil ought to be regarded as an offence, unless it be when measured by the standard of the Golden Rule. During the last years of my teaching the only tests I ever applied to an act of which it was necessary to judge, were those of the above questions. By this course I gained many important advantages.

In the first place, the plea, "You have not made any rule against it," which for a long time was a terrible burden to me, lost all its power.

In the second place, by keeping constantly before the scholars as a standard of action, the single text of right and wrong as one which they were to apply for themselves, I was enabled to cultivate in them a deep feeling of personal responsibility.

In the third place, I got a stronger hold on their feelings, and acquired a new power of cultivating and directing them.

In the fourth place, I had the satisfaction of seeing them become more truthful, honest, trustworthy and manly in their intercourse with me, with their friends, and with each other.

Once, however, I was sadly puzzled by an application of the principle, by one of my scholars, George Jones,—a large boy—who, partly through a false feeling of honor, and partly through a feeling of stubbornness, refused to give me some information. The circumstances were these.

A scholar had played some trick which had intercepted the exercises. As was my custom, I called on the one who had done the mischief to come forward. As no one started I repeated the request, but with no success. Finding that the culprit would not confess his guilt, I asked George if he knew who had committed the offence?

"I did not do it," was the reply. "But do you know who did?" "Yes, sir." "Who was it?" "I do not wish to tell." "But you must; it is my duty to ask, and yours to answer me." "I cannot do it sir," said George firmly. "Then you must stop with me after school." He stopped as requested, but nothing which I could urge would induce him to reveal anything. At last, out of patience with what I believed to be the obstinacy of the boy, I said—"Well, George, I have borne with you as long as I can, and you must either tell me or be punished."

With a triumphant look, as though conscious that he had cornered me by an application of my favorite rule, he replied, "I can't tell you because it would not be right; the boy would not like to have me tell of him, and I'll do as I'd be done by."

A few years earlier I should have deemed a reply thus given an insult, and should have resented it accordingly; but experience and reflection had taught me the folly of this, and that one of the most important applications of my oft quoted rule was—to judge of the motives of others as I would wish to have them judge of mine. Yet, for a moment, I was staggered. His plea was plausible; he might be honest in making it; I did not see in what respect it was fallacious. I felt that it would not do to retreat from my position and suffer the offender to escape, and yet that I should do a great injustice by compelling a boy to do a thing, if he really believed it to be wrong.

After a little pause I said, "Well, George, I do not wish you to do anything which is wrong, or which conflicts with our Golden Rule. We will leave this for to-night, and perhaps you will alter your mind before to-morrow.

I saw him privately before school, and found him more firm in the refusal than ever. After the devotional exercises of the morning, I began to question the scholars (as was my wont,) on various points of duty, and generally led the conversation to the Golden Rule.

"Who," I asked, "are the persons to whom, as members of this school, you ought to do as you would be done by? Your parents who support you and send you here? your schoolmates who are engaged in the same work with yourselves? the citizens of the town, who by taxing themselves, raise money to pay the expenses of this school? the school trustees, who take so great an interest in your welfare? your teacher? or the scholar who carelessly or wilfully commits some offence against good order?"

A hearty "Yes," was responded to every question.

Then addressing George, I said, "Yesterday I asked you who had committed a certain offence? You refused to tell me, beeause you thought it would not be doing as you would be done by. I now wish you to reconsider the subject. On one side, are your parents, your schoolmates, the citizens of this town, the school trustees, and your teacher, all deeply interested in everything affecting the prosperity of this school. On the other side, is the boy who by his act has shown himself ready to injure all these. To which party will you do as you would be done by?"

After a moment's pause, he said, "to the first, it was William Brown who did it."

My triumph, or rather the triumph of the principle was complete, and the lesson was as deeply felt by the other members of the school, as by him for whom it was specially designed.

V. CIVILITY AND REFINEMENT IN SCHOOLS.

It is painful to observe the lack of this, in some of our public schools. There is so much of coarseness and roughness in some of them (not to speak of vulgarity and profanity) that parents who regard its influence on their children are unwilling to send them where they are liable to learn as much that is bad as that is good.

Is there not a necessity that teachers as a body should look more at this evil, and to its correction? Those influences which are adapted to improve the mind, ought necessarily to improve the manners. There ought to be a connection between the school and this improvement, just as there is between other causes and their effects.

The effect of allowing a child to run at large in the street, and mingle with all the company found there, should be well understood beforehand. The effect of accustoming a child to good society, is also well known. From such a child, it would be as surprising to hear vulgarity, as to find one of the other class refined.

No one would be at a loss to determine the influence on the morals and refinement of a company such as is usually found in a dram shop. How long could a youth visit such a place, and not show the influence on his own habits and tastes? Such company and such influences will soon educate a low, vulgar, and vicious person. But why should not a school shew as decidedly an elevating effect on the character? The influence of knowledge when rightly directed, is to elevate, but if there is often connected with the place of its communication, an influence which lowers the character instead of elevating it, it is both strange and unfortunate.

There is something in the idea of a teacher that naturally commands respect. The supposition is, that there are superior qualifications that fit the teacher for the office. Every teacher should command respect by being worthy of it; then how easy to teach scholars that what is to be respected in others, is respected in themselves.

With many, who have lost all care for the respect of others or themselves, this might have no effect; but not so with those who have been properly trained, hence then the great necessity for proper early training in habits of refinement and culture.

In regard to politeness in school boys, the following anecdote was lately told by a clergyman at a Teachers' Institute. He said: "Soon after I was settled in the ministry, I was appointed a member of the school-committee of the place. In my frequent visits to one of the schools, I took notice of a boy whose clothing was very coarse and showed many patches, but still was clean and neat throughout. His habits was remarkably quiet and orderly, and his manners very correct. His disposition were evidently generous and kind, and his temper mild and cheerful, as he mingled with his schoolmates at play, or joined their company on the road. When last I saw him he was on his way to school. His appearance still bespoke the condition of his poor and widowed mother, and his hat was but a poor protection against either sun or rain; but, as I passed him, he lifted it with an easy but respectful action, a pleasant smile, and a cheerful 'good morning,' which, unconsciously to himself, made the noble boy a perfect model of genuine good manners. His bow, his smile, and his words, all came straight from his true, kind heart. When last I saw him, thirty years had passed, and I was on a visit to the West. The boy had become a distinguished lawyer and statesman; but his bow, and his smile, and his kind greeting, were just the same as those of the barefooted boy with the poor hat."

Respect the Old.—Bow low thy head, boy. Do reverence to the old man. He was once young like you, but age and the cares of life have silvered his hair. Once, at your age, he possessed the thousand thoughts that daily throng your mind. Bow low thy head, boy, as you would be reverenced when you are aged, and your fine form bent under the weight of years."

VI. ADVICE TO A YOUNG TEACHER.

Endeavor to introduce into your school the most perfect system at the beginning, and be very slow to admit any change which inexperienced people may think very good,

unless its utility is obvious. Pay great attention to the *order* of your school, and to the *manners* of the children, and when they leave you, see that they retire with order and regularity.

I need not urge upon you to unite with this strict discipline *great mildness,* and perfect freedom from passion. I wish that you would introduco some *religious exercises.* Let the scriptures be daily read, in a reverential manner, by yourself or some good reader in the School. Be careful to teach every branch *thoroughly.* A school is lost when it gets the character of being showy and superficial.

Let me conclude with urging you to enter into the spirit of your occupation. Learn to love it. Try to carry into it a little enthusiasm. Let it not be your task, but your delight. Feel that Providence is honoring you in committing to you the charge of immortal minds. Study the character of your pupils, and the best modes of exciting and improving them. You have heart enough; fix it on this noble object.

And now, my dear friend, be of good courage. Bear up with calm, steady resolution, under the trials of life. Lift your eyes with gratitude and confidence to your Father in heaven, and he will never forsake you.

VII. SOME GENERAL RULES AND PRINCIPLES FOR TEACHERS AND PUPILS.

These rules and principles are derived from various sources. They are adapted to the wants of pupils and teachers, and are well worthy of their consideration.

RULES FOR THE TEACHER.

1. From your earliest connection with your pupils inculcate the necessity of *prompt* and *exact* obedience.
2. Unite firmness with gentleness; and let your pupils always understand that you *mean* exactly what you *say.*
3. Never promise anything unless you are quite sure you can give what you promise.
4. Never tell a pupil to do anything unless you are sure he knows how it is to be done; or show him how to do it, and then see that he does it.
5. Always punish a pupil for *wilful disobedience;* but never punish unduly or in anger: and in no case should a blow be given on the head.
6. Never let your pupils see that they can vex you, or make you lose your self-command.
7. If pupils are under the influence of an angry or petulent spirit, wait till they are calm, and then reason with them on the impropriety of their conduct.
8. Never yield anything to a pupil because he looks angry, or attempts to move you with threats and tears. Deal mercifully, but justly, too.
9. A little present punishment, when the occasion arises, is more effectual than the threatening of a greater punishment should the fault be renewed.
10. Never allow pupils to do at one time what you have forbidden, under the like circumstances, at another.
11. Teach the young that the only sure and easy way to *appear* good is to *be good.*
12. Never allow tale-bearing.
13. If a pupil abuses your confidence, make him, for a time, feel the want of it.
14. Never allude to former errors, when real sorrow has been evinced for having committed them.
15. Encourage, in every suitable way, a spirit of diligence, obedience, perseverance, kindness, forbearance, honesty, truthfulness, purity and courteousness.

THE EVILS OF ABSENCE.

1. If a boy learns to feel that he may leave his duties as a scholar for trival causes, for causes equally trivial he will leave his business when a man.

2. The time of the teacher and of the whole school is wasted while this absence is being recorded.

3. The teacher's time is being wasted in reading and recording the delinquent's excuse when he returns to the school.

4. He interrupts the exercises of the teacher, or some part of the school, in finding the places at which his various lessons commence.

5. He has lost the lesson recited yesterday, and does not understand that portion of to-day's lesson which depends upon that of yesterday; and such dependance usually exists.

6. The teacher's time and patience are taxed in repeating to him the instructions of yesterday; which, however, for want of study, he does not clearly appreciate.

7. The rest of the class are deprived of the instruction of their teacher, while he is teaching the delinquent.

8. The progress of the rest of the class is checked, and their ambition curbed, by waiting for the tardy delinquent.

9. The pride of the class is wounded, and their interest in their studies abated, by the conduct of the absentee.

10. The reputations both of teacher and school suffer, upon days of public examination, by failures which are chargeable to the absence and not to the instruction.

11. The means generally provided for the education of the delinquent are wrongfully wasted.

12. He sets a pernicious example for the rest of the school, and usually does actual mischief while absent.

RULES FOR PUPILS.

1. Have all your books and school apparatus fixed and ready at least one day before the school commences.

2. Be *early* in your attendance at school.

3. Be *constant* in your attendance at school.

4. Regard promptly and cheerfully all the regulations of school.

5. While in school improve all your time with a real carefulness.

6. Be *honest* in regard to your lessons; get them *thoroughly* and by your own diligence.

7. Speak and act the truth in all things and at all times.

8. Be pleasant and accommodating to your companions.

9. In the streets let your deportment be orderly and becoming; be gentle and civil.

10. Keep your books, maps, &c., in good order and well arranged.

11. Keep your desk and the floor about it in a neat and cleanly condition.

12. Before entering the school brush the mud from your boots and shoes, and avoid everything which can render the place you occupy unpleasant to the members of the school or to visitors.

13. Cultivate, carefully and constantly, pleasant feelings. Allow yourself only in pleasant thoughts; utter only pleasant words; exhibit only pleasant actions; and in all things manifest the spirit of Christ.

14. Finally, love God and keep his commandments; for in this you will exhibit the greatest of all wisdom, and secure the most desirable of all rewards. "The fear of the Lord is the beginning of wisdom, and a good understanding have they that keep His commandments."

GENERAL PRINCIPLES OF INSTRUCTION.

There are several general principles, founded in nature and deduced from observation, but too often overlooked, which should be our guide in teaching, and of which we should never lose sight.

1st. Whatever we are teaching, the attention should be aroused and fixed, the faculties of the mind occupied, and as many of them as possible brought into action.

2nd. Divide and subdivide a difficult process, until the steps are so short that the pupil can easily take them. This is what we call aptness to teach.

3rd. Whatever is learned, let it be made familiar by repetition, until it is deeply and permanently fixed in the mind. The faithful application of this principle makes thorough teaching the best kind of teaching, certainly.

4th. Insist upon every lesson being learned so perfectly that it shall be repeated, as everything in a large school should be done, without the least hesitation. This cannot, however, be applied in the case of very young scholars.

5th. Present the practical bearings and uses of the thing taught, so that the hope of an actual advantage and the desire of preparation for the future, be brought to act as motives. This principle is often neglected.

6th. Follow the order of Nature in teaching, whenever it can be discovered.

7th. When difficulties present themselves to the learner, diminish and shorten rather than remove them; lead him, by questions, to overcome them himself. It is not what you do for the child so much as what you lead him to do for himself, which is valuable to him.

8th. Teach the subject rather than the book. The book is but an aid in acquiring a knowledge of the subject.

9th. Teach one thing at a time. Advance step by step, making sure of the ground you stand on before a new step is taken.

VIII. THE BEST MEANS OF OBTAINING ORDER IN A SCHOOL.

To obtain order and discipline in a school is of the utmost importance; there can be very little, if anything, taught in the midst of disorder. The children themselves are not happy in it, the teacher is made unhappy and fretful, and totally unfit for his work, and at the close of the day he cannot look back and feel that he has faithfully performed his duty. On the contrary, in a well-disciplined and organised school it is surprising what an amount of work may be done, because it is performed in a regular manner, and every portion has its allotted time. The children get more knowledge, and learn besides the habits of regularity and order, and the teacher is cheerful and satisfied with himself.

I think perhaps the following hints may be useful to any of my fellow-labourers who find a difficulty in obtaining that which is most essential and necessary, viz., order.

In the first place give your commands in a quiet and firm tone. I have invariably found that a noisy teacher has a noisy school. Let your voice be distinctly heard throughout the room; and when once you have issued a command, see that it is strictly obeyed. It is therefore of great importance that your commands should be considered before they are spoken.

Firmness in the tone of voice is necessary, as indecision is very soon noticed by children, and will be treated accordingly. Be sure that you always perform your promises, and never let a child have reason to think his teacher has broken his word. Whether you offer a reward to the obedient or a punishment to the disobedient, in either case keep strictly to what you have said.

Instant obedience should be required, no hesitation allowed; an occasional drilling

exercise would greatly facilitate this. I do not think that time is wasted which is spent in training children to habits of regularity.

Be sure that one command is obeyed before another is given. A teacher must govern his own temper, as hastiness and irritability will make him fail in the very object he is trying to attain. These characteristics should always be found in a teacher, viz., patience, firmness, and gentleness.

In giving a lesson, I find that a kind and pleasing tone of voice will help to fix attention, and make a difficult subject interesting and agreeable.

Order must be preserved in little things. There are few things too trivial to be attended to. Let every child know his place and his work, and keep to it. In making children orderly, a teacher studies his own comfort as well as the good of his scholars.

"Let every thing be done decently and in order."

IX. RULES FOR HOME EDUCATION.

The following rules we commend for their excellence, brevity, and practical utility. They are worthy of being printed in letters of gold, and placed in a conspicuous position in every household. It is lamentable to contemplate the mischief, misery and ruin, which are the legitmate fruit of those deficiencies which are pointed out in the rules to which we have referred. Let every parent and guardian read, ponder, and inwardly digest:

1 From your children's earliest infancy, inculcate the necessity of instant obedience.

2 Unite firmness with gentleness.—Let your children always understand that you mean exactly what you say.

3. Never promise them anything unless you are quite sure you can give them what you promise.

4. If you tell a little child to do something, show him how to do it, and see that it is done.

5. Always punish your children for wilfully disobeying you, but never punish them in anger.

6. Never let them perceive that they can vex you, or make you lose your self-command.

7. If they give way to petulance and temper, wait till they are calm, and then gently reason with them on the impropriety of their conduct.

8. Remember that a little present punishment when occasion arises, is much more effectual than the threatening of a greater punishment should the fault be renewed.

9. Never give your children anything because they cry for it.

10. On no account allow them to do at one time what you have forbidden under the like circumstances at another.

11. Teach them that the only sure and easy way to appear good is to be good.

12. Accustom them to make their little recitals with perfect truth.

13. Never allow tale-bearing.

14. Teach them that self-denial, not self-indulgence, is the appointed, and the surest method of securing happiness.

15 Guard them against the indulgence of an angry and resentful spirit.

16. Above all, strenuously endeavour to give your children a knowledge of THINGS, instead of a knowledge of WORDS.

These rules are plain and simple enough, one would think, and easy of observance by parents; but how often are they reduced to practice? Not by one in a thousand! The great majority of parents seem to rest quite satisfied that because a child attends school, and learns by rote a few elementary rules, that all's right; not to mention a great multi-

plicity of words, about the meaning of which they know nothing? This is all wrong, and hence the too many dunces of twenty, and the labor of the teacher gone. It is here that the parent should assist the school teacher. It is his duty to do so. "Understandest thou what thou readest?" was a question put a long time ago, and should be kept in mind by every parent. There is much to be learned at the family hearth.

VIII. THE TEACHER AND HIS DUTIES.

I. HINTS ON SPELLING, READING AND RECITATION.

Reading and spelling are, of course, among the most important things to be taught; and good reading and spelling can readily be appreciated by almost all. Hence, parents who find their children interested in these branches, and constantly improving in them, will think that they are doing well, and that their teacher is a good one. Let these important branches receive a full share of attention.

To awaken interest in a spelling class, let each scholar, commencing at the foot of the class, pronounce a word, selected from the lesson, to the one of the head; and if it is missed by any, let the one who spells it "go up." Do this for a few times before beginning the lesson yourself, and you will soon find that all the *hard* words will be pretty sure to be spelled correctly. Then you can allow them to select from a reading book, from proper names, the names of the months, or other classes of words.

To improve the voices of scholars, one of the best plans is to have them repeat in concert, after you, short, spirited passages of prose or poetry, on different pitches, rapidly or slowly, loudly or softly, as you may direct.

To prepare young scholars to declaim or rehearse without embarrassment, let them step forward, bow to the class, and *count* from one to twenty, or fifty—repeat a line of the multiplication table,—one of the tables in compound number,—or even the names of the days of the week, the seasons, the months of the year, or any lessons which they have thoroughly committed. They will soon take delight in the practice.

During warm weather, the regular exercises should be somewhat frequently varied by singing or concert exercises, oral instructions, etc.

In giving oral instructions, the teacher should endeavor to come down nearly to the level of the pupils' mind, but not so near that he can understand all that is said without any effort. If some scholar does not understand, and asks for explanations, give any one who does comprehend an opportunity to explain it; never answer such question till you have given the scholars the privilege of doing so.

The teacher should endeavor *to be* what he would have his scholars *become;* and should remember that the surest way to make them what they *should* be, is to treat them as though they *intended to be* just what they should.

One of the best ways to prevent falsehood is suggested in the foregoing: a skilful teacher will easily show a boy who has lied that he is in trouble. The pupils of Dr. Arnold, the great English teacher, were very soon broken of the habit of lying. They used to say to each other, "It is mean to lie to *Dr. Arnold*, for he always believes a fellow."

II. PRACTICAL HINTS ON TEACHING PUPILS TO READ.

It has often justly been observed, that very few persons read well. To read simply and naturally, with animation and expression, is indeed a high and rare attainment. To attain a correct pronunciation, a proper tone of voice, and the right inflections, such as will convey clearly to the minds of those who listen, the real sentiments and ideas

which the writer intended should be conveyed, is a degree of perfection in the art of reading, that few, very few, ever arrive at.

Besides, what is by many called *good reading*, is far from it. We mean that which calls the attention of the listener from the subject of the discourse to the supposed taste and skill in pronouncing it. As the best window is that through which the light passes most freely, and affords the most natural view of the landscape without, so is he the best reader who brings before us the mind of the author unencumbered by the tints and tracery of his own style and manner. Still, it must be remembered that with most persons reading is an art. The best readers are those who have most diligently studied their art; and yet studied it so well that you can scarcely perceive they have studied it at all. You so thoroughly understand, and so sensibly feel the force of *what* they read, that you never think *how* they are saying it.

The principal reason why there are no more good readers is owing to defects in education. The error begins with teaching the alphabet. This is often an unmeaning excercise; nay, in the great majority of schools it is a tedious affair to children, after which the pupil is set at reading "bla, ble, bli,"—those unmeaning and worse than useless monosyllables. Instead of this the child should be taught ideas, and words which convey ideas, at first. For example; at the first lesson the pupil may be taught the letter *o*, then the letter *x*, and next the word *ox*. At the second lesson he may be taught *b*, and *y*, which, with *o*, learned at the first lesson, forms the word *boy*. Thus he learns words that convey thoughts to his mind, and from the conversation of the teacher concerning them, and the questions asked, he finds, at the first lessons, that learning the alphabet, and learning to read, are not dull, monotonous, meaningless tasks. He becomes at once interested; hence he can not fail to improve rapidly.

It is during the early training of children that the greatest fault in teaching reading consists. Bad habits then formed are exceedingly difficult to get rid of. But as teachers will not only have scholars who have not been taught at all, but those who have been taught badly, the inquiry naturally arises, "How can we make good readers of those who now read *badly*, as well as those who cannot read at all?" In reply we give a few rules, which, if observed, will be of much service in suggesting modes of teaching reading successfully. [The "Spelling Book Superseded" might also be consulted with advantage.—Ed.]

Be sure that the pupil thoroughly understands what he reads. Probably there can be no one direction given, which is of more importance, especially in teaching children, than this. Attention to it will sweep away those unmeaning combinations before alluded to, such as "blo, blu, dac, hec," and all the rest of this ridiculous tribe, found in nearly every spelling-book. It is in reading these that a habit is formed of separating the sight and sound of words from the sense; and this habit once formed, clings to the mind long after the years of childhood have passed away.

Here, then, while teaching the first principles of reading, is the place to commence the observance of the above rule. This is absolutely essential to success. Indeed, it is during the child's first instruction that the habit of fully comprehending in the mind that which is presented to the eye, must be formed. So with the more advanced pupils, if you would have them read well, *they must understand what they read.* How can a person be expected to express the language of a thought properly, if he does not comprehend the thought itself? If, therefore, you would have a sentence well read, read so as to be understood and felt by the hearer, take care that the reader himself both understands and feels it.

Remember that the tones and emphasis which we use in conversation are those which form the basis of GOOD ELOCUTION. Children should therefore be instructed to read as they talk; particularly in regard to emphasis and inflection. But there are some child-

ren who talk so badly that they can scarcely be understood. This is owing to defects in articulation. To remove this habit, we know of no better way than thorough drilling in uttering the elementary sounds of the language. This may be practiced, at first, by the class in concert, then by each pupil singly.

The first exercise should be pronouncing the word, then the vowel sound in the word, as follows: ale, a; arm, a; all, a; at, a; eat, e; bet, e; ice, i, etc. Then the sub-vocals should be spoken in the same manner, thus; ebb, b; odd, d; him, m; buzz, z. Then the aspirates: up, p; it, t; sin, s; thin, th. When these have been well learned, words should be pronounced and spelled by sounds as: m..a..n; d..a..day; e..t—eat. These exercises will give command of the organs of articulation, and teach the habit of speaking distinctly.

The Importance of Reading.—It is of the greatest importance that young persons should seek the companionship of books; should rest at times from the bustling affairs of business, and hold sweet converse with those great minds which have flourished in all ages, and transmitted their researches for the benefit of posterity.

Books are never-failing sources of knowledge. We gaze upon nature, and turn to our books as our instructors; upon the starry heavens, and see there the streaming comet, the flashing meteor, the lurid lightning, and hear the deep-toned thunder pealing out its wildest notes—and then turn to the pages of science to learn why they are thus, and what great end they serve. And if we dive beneath the surface of the earth, a new field for contemplation is presented to the view—and this too is treated of on the printed page; for the geologist has done his part, that no avenue may be closed against the young aspirant for knowledge.

To seek for instruction is the imperative duty of the young, and there can be no better way to employ the leisure moments. Not in sauntering idly about, or frequenting the halls of pleasure and folly, but in poring over the pages of the poet, historian and philosopher, and gleaning gems of thought to enrich and beautify the mind.

There can be no higher eulogy upon a young man, than that his evenings were passed at home; where, gathered around the cheerful fireside, books, conversation, and the society of loved ones, render it an altar, a paradise, and a sure defence against the snares of vice and dissipation. We predict for such an one, honor, distinction, and a life of usefulness. And what can be more lovely, or fascinating, than a highly cultivated mind in a young woman. If but half the time which is expended in gaining a few trivial accomplishments was devoted to the right search for knowledge, there would not be such a meagre number of learned and talented women. Besides, the high estimation in which those few are held, is a sufficient stimulus, one would suppose, to urge others to do likewise.

Be a reader, then, a careful reader, if you would be powerful, if you would become wise and honoured, if you would be worthy the name and station of men and women.

III. HINTS HOW TO TEACH WRITING.

Writing has been taught solely as an art. Copies are usually set in the books for the pupils to imitate, but it is much better now and then to vary this system by tracing on blackboard, in presence of the pupils, the writing lesson for the day. They thus see that the copy is not an ideal but a real one. Their ambition is fired to equal the master; and the practice of the eye also assists the practice of the hand.

Every teacher has his own notions about teaching writing, and every parent, too, so far as to the time when "Darling Charley" shall learn to write. So I shall not prescribe

which side must lean against the desk, or how the pen must be held, or the paper laid, but shall proceed to give a few common-place hints about teaching writing.

When the teacher (not the parent) decides it is time to begin to write, let the pupil supply himself with a substantial copybook, not too large, an inkstand not liable to upset, and pens. If quills are used, the teacher should mend and make them out of school hours, so that when the writing signal is given, nothing else may require his attention. Copies should also be set, and every arrangement completed, so that nothing whatever shall disturb the stillness of the writing hour.

Habits of neatness and care must be formed now, if ever. Every hasty line and every blot must be scrutinized and reproved. Improper posture and habits of hand, must be repeatedly noticed and corrected by the teacher. His eye must be everywhere and on everything. None should discontinue writing, until the signal is given for all to do so. Then the pen should be carefully wiped, upon the wiper attached to the copy-book, and when the ink is dry, the book closed, and laid away or gathered up to lie upon the teacher's desk until the next writing hour.

Do you think, teacher, that this standard is too high for you? Not a whit! If you ever want the writing exercise to be a pleasant one, and your copy-books fit to be seen, you must aim high. Straight marks look well, if they show pains-taking.

"Pot-hooks and hangers," are ten times better to discipline the muscles of the fingers than all the fine hair strokes of the writing master. Suit your copies to your pupils' ability, and oblige them to follow them the requisite time. Some may teach writing in twelve lessons, to older brains and more practised fingers, and pocket the $5 with the consciousness that it has been a most potent incentive to the attainment of the hand, but you cannot teach it in thrice twelve lessons, to the pupils of a common school. System and perseverance alone will enable you to succeed.

Do not forget the black board; now, suppose you can imitate a bad letter and show how to make a good one of it? The black board is the place to show the science of writing, analyze its principle, and interests the pupils more thoroughly in the art of writing.

IV. SUGGESTIONS ON THE MODE OF TEACHING ARITHMETIC.

1. Qualifications.

The chief qualifications requisite in teaching Arithmetic, as well as other branches, are the following: –

1. A thorough knowledge of the subject.
2. A love for the employment.
3. An aptitude to teach. These are *indispensable to success.*

2. Classifications.

Arithmetic, as well as Reading, Grammar, &c., should be taught in *Classes.*

1. This method saves much time, and thus enables the Teacher to devote more attention to *Oral Illustrations.*

2. The action of mind upon mind, is a *powerful stimulant* to exertion, and cannot fail to create a *zest* for the study.

3. The mode of analyzing and reasoning of one scholar, will often *suggest new ideas* to the others in the class.

4. In the classification, those should be put together who possess as nearly equal capacities and attainments as possible. If any of the class learn quicker than others, they should be allowed to take up an extra study, or be furnished with additional examples to solve, so that the whole class may advance together.

5. The number in a class, if practicable, should not be less than six, nor over twelve or fifteen. If the number is less, the recitation is apt to be deficient in animation; if greater, the turn to recite does not come round sufficiently often to keep up the interest.

3. Apparatus.

The *Black-board* and *Numerical Frame* are as indispensable to the Teacher, as tables and cutlery are to the house-keeper. Not a recitation passes without use for the Black-board. If a principle is to be demonstrated or an operation explained, it should be done upon the *Black-board*, so that all may see and understand it at once.

To illustrate the increase of numbers, the process of adding, substracting, multiplying, dividing, &c., the *Numerical Frame* furnishes one of the most simple and convenient methods ever invented.*

4. Recitations.

1. The *first* object in a recitation, is to secure the *attention* of the class. This is done chiefly by throwing *life* and *variety* into the exercise. Children loathe dullness, while animation and variety are their delight.

2. The Teacher should not be too much confined to his Text-book, nor depend upon it wholly for illustrations.

3. Every example should be *analyzed;* the "why and wherefore" of every step in the solution should be required, till each member of the class becomes perfectly familiar with the process of reasoning and analysis.

4. To ascertain whether each Pupil has the right answer to all the examples, it is an excellent method to name a question, then call upon some one to give the answer, and before deciding whether it is right or wrong, ask how many in the class agree with it. The answer they give by raising their hand, will show at once how many are right. The explanation of the process may now be made.

Another method is to let the class exchange slates with each other, and when an answer is decided to be right or wrong, let every one mark it accordingly. After the slates are retuned to their owners, each one will correct his errors.

5. Thoroughness.

The motto of every Teacher should be *Thoroughness.* Without it, the great ends of the study are *defeated.*

1. In securing this object, much advantage is derived from *frequent reviews.*

2. Not a recitation should pass without *practical exercises* upon the black-board or slates, besides the lesson assigned.

3. After the class has solved the examples under a rule, each one should be required to give an *accurate account* of its principles, with the *reason* for each step, either in his own language or that of the author.

4. *Mental Exercises* in Arithmetic, either by classes or the whole school together, are *exceedingly useful* in making ready and accurate arithmeticians, and should be *frequently* practised.

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* Every one who cyphers, will of course have a slate. Indeed, it is desirable that every scholar in school, even to the very youngest, should be furnished with a small slate, so that when the little fellows have learned their lessons, they may busy themselves in writing and drawing various familiar objects. *Idleness* in school is the parent of *mischief,* and *employment* is the best antidote against *disobedience.*

Geometrical forms, diagrams and *solids* are also highly useful in illustrating many points in arithmetic, and no school should be without them. They can be obtained at the Educational Depository, Toronto.

6. Self-Reliance.

The habit of self-reliance in study, is confessedly invaluable. Its power is proverbial; I had almost said omnipotent. "Where there is a will, there is a way."

1. To acquire this habit, the pupil, like a child learning to walk, must be taught to depend upon himself. Hence,

2. When assistance in solving an example is required, it should be given indirectly; not by taking the slate and performing the example for him, but by explaining the meaning of the question, or illustrating the principle on which the operation depends, by supposing a more familiar case. Thus the pupil will be able to solve the question himself, and his eye will sparkle with the consciousness of victory.

3. He must learn to perform examples independent of the answer, without seeing or knowing what it is. Without this attainment, the pupil receives but little or no discipline from the study, and is unfit to be trusted with business calculations. What though he comes to the recitation with an occasional wrong answer; it were better to solve one question understandingly and alone, than to copy a score of answers from the book. What would the study of mental arithmetic be worth, if the pupil had the answers before him? What is a young man good for in the counting-room who has never learned to perform arithmetical operations alone, but is obliged to look to the answer to know what figure to place in the quotient, or what number to place for the third term in proportion, as is too often the case in school ciphering?

V. MENTAL ARITHMETIC—BEST MEANS OF TEACHING IT.

(By John H. Sangster, Esq., Principal of the Central School, Hamilton.)

Upon its first introduction into his school, the teacher should endeavour to make the subject as attractive as possible; especially must he aim at extreme simplicity, as every effort will eventually prove a failure, unless he guard against giving the class questions above their capacity.

The larger the class learning mental arithmetic, and the greater the variety of modes consequently adopted by the different children to obtain the answer, taking it for granted that the teacher always encourages each child to explain the steps by which he arrives at the required result, the more easily and effectively is it taught. Suppose the class, then, to contain from fifty to a hundred children, between the ages of ten and sixteen, they may be most conveniently seated, if the arrangements of the school permit, on parallel benches, rising one above another, as in a gallery, so that the teacher, when at his proper station, before the front seat, can see all that is going on in the class, and be able to check instantly the slightest inattention. It may be here proper to remark, that, while we would encourage the teacher to diligent self-preparation, every evening, for the duties of the following day, we cannot too forcibly urge the impropriety of his making use, during the lesson, of any text-book containing question and answer. It is so palpable an acknowledgment of his inability to obtain the answer as quickly as his pupils, that very soon they lose that respect for their master's attainments which is essential to his usefulness and success. Besides, the habit of giving questions extempore is so exceedingly advantageous in other respects, and is so easy an acquisition, that no teacher should hesitate a moment which mode to adopt.

In conducting the lesson, the teacher should steadily keep in view that the grand object to be attained is, not so much mental facility in computation, as rapidity of thought, power and truthfulness of intellect; and accordingly every question must be made more or less conducive to this one great end. Bearing this, then, constantly in mind, he will direct his attention chiefly to three things:—First. He will be careful that all, or nearly

all the children in the class are actually engaged in solving the problem. Secondly. When the answer is given, he will ascertain that all are thoroughly conversant with the principles by which it was obtained. And thirdly, he will anxiously endeavour to develope in his pupils that amount of self-confidence and ardent desire to surmount obstacles which the subject is so well designed to teach, and that form so essential an element in the character of him who would successfully encounter the difficulties and temptations of life.

In briefly adverting to the manner in which this threefold object may be accomplished we shall suppose that 80 or 100 children, who have already devoted some two or three months' attention to the subject, are seated, as before described, on parallel benches, rising one above another. The teacher without any text book, *stands* before the class, ready to propose questions, receive answers, and explain, on the blackboard, the principles involved in their solution. The question is propounded clearly and distinctly, and while the pupils with lips instinctively moving and eyes half closed as if to shut out all external objects, are *silently* employed in obtaining the answer—the teacher carefully guards against giving any intimation whatever, either by word or sign, as to the individual from whom he intends to require it. Hence, every child, knowing his liability to be called on for the answer, does his utmost to be able to give it correctly.

Although no show of hands or any other signal is allowed, yet it is an easy matter to distinguish those that have finished from those still engaged in the mental operation. The more excitable, directly they have ascertained the answer, can scarcely refrain from springing off their seat, and seem to be almost bursting with eagerness to be permitted to announce it: while even in the more plodding and sluggish, the sudden illumination of their countenance presents an unmistakeable sign of their readiness to make it known. The teacher uses his own discretion as to the amount of time requisite for waiting, determining it by the nature of the question and the capacity of the class. A sufficient interest having clapsed, some one is requested to announce the answer. If not given instantly, and correctly, a second, a third, and a fourth, in different parts of the class, are asked for it in rapid succession. If these all fail in giving an accurate reply, it is required from an entire seat or the question is thrown open to the whole class. If then as sometimes happens, none or but few answer, the teacher, so far from jumping at the conclusion that his pupils are incapable of learning mental arithmetic, attributes the failure to his own want of consideration in not adapting the question to their capacity, and, with more judgment and discretion, resolves in future, rather to lead them almost imperceptibly onward, from the simple to the difficult, than attempt to drive or pull them through the perplexities of an uninviting study. When it occurs that none but erroneous answers are returned, instead of offering a special rule to meet the case, the question is for the time abandoned, and a much easier one of the same description substituted in its place; this being correctly answered and thoroughly explained by a number of the pupils a second and a third of the same nature, but somewhat more difficult, are successfully dealt with. Thus in the space of two or three minutes the difficulty is so effectually removed, that when the original question is again proposed, it is answered by the majority of the class with facility. The pupils are left as much as possible to their own ingenuity in devising methods for solving each problem, still, when a particularly difficult question is under consideration, the teacher sometimes endeavours to facilitate the process of finding the answer, by throwing such judicious hints as he may think proper; but however much they are thus helped, it is done in such a manner, that the children learn the lesson, fully impressed with the idea that they have resolved every difficulty without assistance. In every instance when the answer to a problem is given accurately, as many of the pupils as convenient, are requested to state the steps by which they arrived at the required result. The teacher also indicates the means pursued by himself. The

principles on which these different modes depend are all investigated, and thoroughly explained on the blackboard; the more expeditious method pointed out and recommended to the class; and, in further illustration of the rule, one or two other questions of the same kind proposed. Another class of questions are then proceeded with, and so on till the end of the lesson, which it is not expedient to continue more than twenty minutes or half an hour.

VI. TEACHING GEOGRAPHY AND HISTORY.

(From the Prefatory note to Teachers, in the Introduction to the Geography and History of British America, by Mr. J. George Hodgins.)

In teaching the geography and history of a country, a map of the place described is an almost indispensable necessity. It aids in illustrating the lesson, gives interest to the instruction, and associates in the mind of the pupil the outlines and chief features of the country, with its history, its memorable places, and the achievements of its sons. The Heights of Alma and the Heights of Queenston are historic spots alike to the French and English; but to be enabled to trace the course of the Alma and the Niagara, now so famous in our annals, gives interest to the otherwise dry details, and fixes indelibly in the mind of the pupil the lesson of instruction sought to be imparted by the teacher.

Where a large map is not accessible to the teacher, it might be well to direct an expert pupil to draw upon the black-board from an atlas, an enlarged outline of the country described,—its rivers, mountains, and political divisions. This adds interest and variety to the lesson; and even where maps are available, practice of this kind is a sure means of imprinting upon the memory the boundaries, physical features and peculiarities of outline of the country thus depicted. Where this can be done by the class on a smaller scale, and as an exercise upon paper from time to time,—accompanying the outline with a written sketch of the subject of the lesson,—clearness and accuracy, as well as thoroughness will be acquired.

It would greatly facilitate the labor of the teacher were he, before assigning any lesson in geography and history, to test, by a few conversational questions, the pupil's knowledge of his own immediate neighbourhood or residence, or that of the school house the adjacent hills, streams, valleys, roads, country, town or village boundaries, etc. The pupil could thus be led to see that the geography and history contained in the text book was but an aggregate of his own local knowledge collected into a convenient and accessible shape.

VII. FURTHER HINTS ON TEACHING GEOGRAPHY.

If a teacher can sketch well, he should draw his own maps upon the black-board—First, tracing the outline of the country, he mentions the various kingdoms or seas whose boundaries his chalk is tracing;—second, with a few jottings of his chalk he marks out the principal mountain ranges forming the great ridges or apices of the water sheds;—third, he traces the rivers winding their way from their mountain source or sources to the great reservoirs of the globe. He pauses for a moment to review his work,—he has sketched out the works of nature as the hand of the Creator has left them; now he has to begin to sketch the works of art and civilization—he has to people the wilderness and to trace the progressive steps of civilization; upon the banks of the tidal rivers he marks the site of the great mercantile cities; on the shores of the mountain streams he plants the names of the oldest industrial cities; on the coal fields he places those mighty manufacturing cities which have almost sprung into existence since the discovery of the steam-engine—that mightiest monarch of civilization and power, which seems to control the destinies of the world; last of all, he marks the sites of those large towns, which form the market places of the rural population. We said that the work was progressive,—

every fresh touch of the chalk is associated with some new idea, and every fresh idea has its appropriate association with some line or mark upon the board;—the sketch goes on,—it becomes more and more finished;—the skeleton becomes lined with sinews, then clothed with flesh and blood;—every fresh step towards completion excites new interest in the minds of the boys,—they wonder how a few jottings can call up the idea of mountain range, or how a winding line can call up the idea of the course of the sparkling river, or how the little mark put for the mountain city, should awaken to their imaginations, the sound of the flip flap, flip flip, of water mills, and the busy hum of industry; they wonder, but they know not, that the visible picture that their master has drawn with his chalk, would be dull and lifeless without the living moral picture with which it is associated. Such a lesson is complete in its parts and perfect as a whole. Geography properly learned, from beginning to end, is but furnishing to the mind a splendid panorama of the world we live in. Delightful to the young soul is it when thus studied The rivers wind along their circuitous banks, down mountain precipices, over pebbly beds, now clear, now muddy, here broad, there narrow. He sees the whole scene, Alps above Alps, the gentle swelling hill, the lofty peak, the snowy summit, the cloud-capped height. The desert and the forest, the rolling sand, the lofty pines, the groves and vines, all know their places in the picture. The pupil who, in studying geography, thus turns his conceptive faculties to their best use, is furnished with enduring materials of thought. Those who learn but words, must plod their weary way over a barren desert, scarcely relieved by any verdant scene or landscape.

How shall scholars be led thus to study? It is not enough that they commit their lessons to memory, and draw maps; though neither of these things should be omitted. It is as much the duty and privilege of the teacher to open the mental eye to the world we live in, as to unloose the tongue to the names of the objects and to the expression of facts. The teacher must have faithful and accurate delineations on his own inner landscape. Words must to *him* convey meaning distinct and graphic. His own imagination must be trained to fill up the scanty outlines of the text-book. He will never impart a gift he does not possess. If with *him* geography is but a list of well-remembered questions and answers, vainly will you look to see the mass of his pupils make it any thing else. If, when he draws a map, he looks not beyond the black-board or drawing-paper, neither will his pupils. He should read graphic descriptions—he should give his own mind to the subject. He should in fancy climb mountains, descend craters, explore mines, ascend domes, fish on coral reefs, and dive for pearls. He should skate with the Russ—smoke with the Turk—try the wooden shoe of the French, and toil with his brother Swiss. This will make the unseen real, and his manner of speaking will convey impressions to his class that will insensibly carry them beyond the words.

Another exercise which some teachers have found a valuable aid in carrying the minds of their pupils beyond the mere words, is a review by topics. Suppose, for instance, the class to have finished the lessons in the text-book on Europe, and to have reviewed them by the book. Each country may next be given out a topic, and the scholars may be required so to learn it as to be able to go to the outline map and recite it; not in the words of the book, but in an order designated by the teacher. Let them point out the physical, political, and civil features of the country. Suppose the topic to be France. The pupil goes to his outline map, bounds it entirely, points out its mountains, rivers, capes, and promontories; states its government and religion, its civilization and education, the employments, manners, habits, and character of its population, &c. &c.,—bring ing all his general and statistical knowledge to the recitation. Many pupils, habituated to the exercise, thus digest, systematize, assimilate the previously learned, isolated facts, so as to double, at least, their value and interest.

VIII. VOCAL MUSIC IN SCHOOLS—HOW TAUGHT IN GERMANY.

Vocal music is, in Germany, deemed of such importance to all classes, that, for generations, it has been introduced by Government as a prominent branch of popular education. The child enters school at the age of eight years, and remains in the same school until fourteen or fifteen.

There seems to be three paramount reasons for making music a branch of school education in Germany and Switzerland. 1st. Its power as a direct means of mental and moral discipline; 2nd. Its attractiveness as an amusement or relaxation from laborious study; 3rd. Its advantages in after-life to the pupil, both as a social and a religious being. In all of these particulars it is considered of great importance; and in the best schools of Leipsic and Dresden, in Saxony—Zurich and Berne, in Switzerland—the popular course has been to adapt each music lesson to one or the other or all of these branches. To be more explicit:—The music-teacher either gives, at one season of the year, his particular attention to instruction in the elements of music and music reading; at another to rehearsal and singing, for relaxation and amusement; and at another to practising the music of the church; or else, as is more generally the case, he combines the three departments in one, and each lesson has its share, viz.: 1st. Practice of the music of the church (choral singing); 2nd. Instruction in musical notation; 3rd. Singing of cheerful and lively juvenile songs for recreation. This arrangement is very pleasing. It affords great variety, and does not become tiresome to the pupils.

The pupils begin to study note singing at the age of nine or ten years. Previous to that they sing chiefly or entirely by note. This is considered advantageous until the musical ear is sufficiently trained and cultivated. The scale is first presented to the pupil, not by sight but by sound. The teacher sings it slowly and distinctly till all seem to understand, or at least to get some idea of its construction, and of the comparative relation of sounds, one to another. After explaining something of the formation of the scale, its intervals, &c., the teacher writes it upon the black-board, or calls their attention to it in the book, observing particularly the situation of the semi-tones. He now tells them that these characters (the notes) represent the sounds they have just sung, and that each sound has a name taken from one of the letters of the alphabet. This method is very thorough, although somewhat tedious. The pupils sing almost entirely from books, the black-board being used merely for illustration. The more advanced classes of pupils are improved by the frequent introduction and regular practice of new and interesting music, rather than by dry and unconnected exercises. Much time is spent in the best schools in practising the vowels, merely articulating them, for the purpose of obtaining a good delivery, both in singing and speaking.

But one of the pleasantest features of all this is, that the pupils are not wearied by too hard study, or if they become a little fatigued at any time, they know that some delightful recreation is to follow. Variety and entertainment are mingled with instruction, and the pleasure of half an-hour's social singing is a sufficient reward for persevering in any of the more laborious and less interesting exercises. The writer was much amused and delighted, on one occasion, to see the young countenances beam with a smile of approbation, amounting to "I thank you, sir," when the teacher, after a lesson of close elementary study, said, "Now, we'll sing something lively," for it is natural to children to love that music best which is most like their own natures—light, joyous, and free. Now they sing briskly, merrily, heartily—because naturally. The little mill-stream, that has been so long dammed up that it may accumulate strength to drive the heavy wheel, when once more set at liberty goes leaping and dancing and singing along its sparkling way, rejoicing in its freedom. So do these little singers pass from the heavy and useful, but not dull choral practice and elementary confinement, to the merry

"Song of the Cuckoo" and "The Lark;" to the "Singer's Song" and the "Song of Father's Birth-day;" to the songs of the season—of the sun and stars; of the "Beautiful World and the blessed Giver, God;" with the ever dear and welcome songs of "Vaterland." These are the daily occurrences of the "school-room;" and if you would know how such privileged children prize their school, you have but to step in and hear them merrily singing—

"No scene of earthly pleasure,
Happy school,
No hoard of sordid treasure,
Happy school,
Delight us now so well.
Yea, 'tis singing we do prize,
Cheerful hearts in accents rise,
Bid play farewell."

From my own observations and from the statements of other teachers, I believe that singing is a great element in the government of a school. It draws forth the better feelings of the scholar; it rounds and smooths the rough corners of his nature, and imbues him with a higher respect, and with a greater love for his teacher. But here perhaps a difficulty arises in the minds of some teachers, in regard to the capability of imparting the requisite instruction in this department. There need be no difficulty, for every teacher of ordinary talent and acquirements, (and if there any not having this amount, they have most certainly greatly mistaken their calling,) can with a very little exertion so acquaint himself with the simpler rudiments of vocal music, as to be able to impart the necessary instruction.

"But I *can't* learn if I *try*;" entirely wrong; every person endowed with only ordinary capabilities *can* learn to sing. There is a musical germ implanted in the mind of every individual, and it is only from the fact of not permitting it to develope itself that the person does not become a singer. All individuals cannot probably become good singers or the best judges of musical performances; yet they can arrive at such a degree of attainment, that they will be interested, not only in listening to, but also in participating in such exercises."

Socrates even in extreme old age learned to play on musical instruments. Cato when eighty years old thought proper to learn the Greek language; and Plutarch was between seventy and eighty commenced the study of the Latin. Nothing of the kind, whatever the period of life, is impossible for a person of energy and indomitable perseverance. And such a person the teacher should be; and such the successful teacher is.

IX. THE STUDY OF BOTANY.

In all good schools there ought at least to be one Botany class. The study should be entered upon not later than March, so that the scholars may be sufficiently acquainted with the scientific terms, &c., in the space before the spring flowers appear.

The study of botany is liable to become dull, in the absence of living illustrations and the teacher will soon find it necessary to enliven his recitations by black-board drawings, dried specimens, cuttings of wood, &c.

But no artificial preparations will satisfy the learner in science. As indications of Spring multiply, he goes forth into the fields and forests to watch and welcome the first open blossom of the season. This, with us about Cincinnati, is the well known "Pepper and Salt," (Erigenia bulbosa, *Nutt.*) The first discovery of this little spring-born plant is a triumph, and the delight which our young botanists express on that occasion is altogether extravagant, and quite surprising to the uninitiated.

The appearance of the first flower of spring, then, brings us our first relief from the dry abstractions of science, and affords us our first exercise in botanical analysis. When assembled again in the class room, each pupil bearing a specimen of the plant in hand, the teacher directs them all to examine attentively the several parts of it, and to ascertain the nature of the root, stem, leaves, and other appendages, until they are able to describe with promptness, in appropriate terms, when called. A few interrogatories will show whether these things have been correctly learned. Then, in succession, they each resolve the several steps in the analysis. This process, if conducted without error, leads promptly to the Natural Order of the plant under examination. The same process with the "Conspectus of the Genera" under that order, conducts to the *genus* of our plant.

In order to confirm the results of the analysis, we recommend to the student the careful comparison of his specimen with the characters given at the head of the Natural Order, before proceeding to the analysis of the genera; and the same comparison with the generic characters before the study of the species.

This method of analysis conducted according to specific rules, and leading to a speedy and accurate result, affords an exciting rational amusement, as well as an invigorating intellectual exercise; and may often be exchanged in the class-room for the ordinary recitations, with much advantage to the learners. For, in tracing this little plant (*Erigenia*) to its proper place in the Natural system, we do effectually learn its every important character, and put to the test nearly all the science we have previously acquired. Thus the student learns to recognise at once and forever, the tuberous root, hollow stem, sheathing petioles, the umbel, involucre, &c., of the Umbelliferæ. So with regard to any other plant.

In regard to flowers, how much they may do not only to "beautify the earth," but also, with smiling looks and fragrant voices, to contribute to man's enjoyment and promote his cheerfulness. We are well aware that some affect to despise the culture of flowers, regarding them as useless products. But to him who

> "Finds tongues in trees, books in the running brooks
> Sermons in stones and good in everything,"

there will be a sincere delight attending the culture of the flowers which speak so unequivocally of the goodness of the great Creator who has made the flowers—

> "To comfort man, to whisper hope,
> Whene'er his faith is dim;
> For whoso careth for the *flowers*,
> Will much more care for *him!*"

Whenever we see a house, with its neat flower garden and well trained vines and shrubbery, whether it be in the thriving village or away from the "busy haunts and noisy shops," up among the hills or mountains, we always feel that the indwellers have hearts that feel for others woes, "God who careth for flowers," will not be unmindful of those who appreciate the *beauties* as well as the *utilities* of his handiwork. What a bright, joyous, cheerful aspect would the earth wear, if all who dwell thereon would plant and cultivate a few flowers? It would not only tend to "strew man's pathway to the tomb" with flowers, but also to shed a sweet fragrance around his daily walks and vocations. Then will not teachers do what they can to foster a flower-loving spirit? If they will, they will be amply compensated by their reflex influence in promoting a genial disposition in the hearts of the little ones under their charge. Whenever we see a happy boy or girl gaily tripping along the school-ward path, with a bunch of flowers, whether culled from the garden or road side, for the teacher's desk, we always feel that in the young heart

which prompted the gift, the teacher will find a ready and cheerful obedience to his wishes.

We hope the time is not distant, when every teacher will feel it not only a *duty* but a *privilege* to cultivate in the hearts of our youth a refined love for music, paintings, and flowers; feeling assured that thereby much will be done to promote both the happiness and true usefulness of their pupils. And when it shall be deemed an essential part of a school-yard, to have a neatly arranged flower lot, we shall find the love of school increasing, and a growing dislike for coarse and uncourteous acts on the part of the young. Whatever tends to adorn and beautify the place in which children spend much of their time, will leave a pleasing and lasting impression upon their young and tender hearts. In the language of Keats :

> "A thing of beauty is a joy forever;
> Its loveliness increases ; it will never
> Pass into nothingness, but still will keep
> Full of sweet dreams, and health, and quiet breathing:
> Therefore, on every morning let's be wreathing,
> A flowery band to bind us to the earth."

And, as another says, "if rightly wreathed, the band will bind us to Heaven no less."

X. NATURAL HISTORY AS A BRANCH OF ELEMENTARY INSTRUCTION.

Natural History, as a branch of Education, has been almost entirely neglected in our Schools, although it treats of objects with which we come daily and hourly into contact, throughout the whole course of our lives. Much time is devoted to subjects, which have but a remote and indirect bearing on the pupil's future career; yet, how few there are who come out of the Elementary, or even the Grammar School, with a knowledge of the name and history of the little plant which grows at the side of the play-ground, or of the rock which appears in the neighbouring valley.

We know no class of men for whom Natural History studies are more fitted than for teachers. Most of them have sufficient leisure for these pursuits, which have this peculiar advantage, that while they improve the mind they give health to the body. What more beneficial to the teacher, than to escape from the crowded school-room, and to wander over the green fields and wild moors, through shady forests, or along the solitary shore, and to examine, as he passes, the lovely flower, blushing beneath the hedge ; the rock forming the picturesque cliff; the insects flitting in the air ; or the finny tribes sporting in the waters !

The introduction of Natural History as a prominent subject of school instruction would, we are persuaded, not only impart valuable knowledge, but also improve the taste of the pupils, and furnish them with healthful sources of enjoyment. It would be an efficient means of mental training, well suited to children; for it would teach how to observe, to note qualities and forms, to mark agreements and differences, and how to describe natural objects in precise and distinctive language. The higher faculties of the mind are also called into exercise, in discovering the relations which the varied productions of nature have to each other, and in grouping and classifying them according to these relations.

There is probably no occupation which might not be more or less benefited by a knowledge of Natural History ; it has a direct bearing on medicine, agriculture, gardening, mining, and indeed most mechanical employments: but to the emigrant—

and in these days, many of our fellow-countrymen seek in distant colonies a more profitable field of labour than they can find in their native land—it is of incalculable value. Through ignorance of minerals, quantities of Iron Pyrites, which have the yellow glittering aspect of the noble metal, but which are comparatively worthless, have been sent from distant lands to England, under the belief that they contained gold. Not long ago, a Californian adventurer picked up a bright transparent crystal, which he imagined was a diamond, and for which he refused £200; he brought it to England, and learnt that it was worthless. A little knowledge of Mineralogy, which might have been given in any Elementary School, would have taught him that this crystal, which he prized so highly, was only a six-sided prism of quartz, and that it could not be a diamond, since this valuable gem never assumes that form.

It is no slight recommendation of Natural History, that the materials for its study are inexhaustible, and that they lie in every man's path. Hence it is, that he who has received elementary instruction in this department of science, is ever brought into connection with the beautiful, the wonderful, and the perfect; he can interrogate Nature, and understand her responses; he is surrounded with familiar friends; though solitary, he is never alone — rocks, plants, and animals are to him ministering spirits, full of hidden meanings, and ready to contribute to his improvement and happiness.

To children, Natural History can be most efficiently taught out of doors. Here, if anywhere, pleasure may be combined with instruction. For this purpose, rambles should be taken into the country pretty frequently, when the weather is favourable. Let botany, for example, be the subject studied; the teacher should visit, with his pupils, some pleasant spot where the wild flowers grow in profusion; the pupils should gather these plants, and the teacher, seated, it may be, on a grassy hillock or on a jutting rock, should, making use of the materials collected, explain their character, structure, and relations. Nor will the intelligent teacher neglect to link with direct instruction the legends and the historical or remarkable events of the district, so as to invest the natural objects with local associations, giving a deeper interest to his subject. The rector of an academy in Scotland, who is an accomplished entomologist, acts the peripatetic philosopher with his pupils, and from his school several good naturalists have gone forth; and we read, not long ago, an account of a National School in the south of England, where the children had made no inconsiderable progress in botany. We are persuaded that Natural History could be taught to children even from an early age, without materially interfering with the time devoted to other branches; and we may hereafter enter into more practical details on the subject. In the meantime, we would ask any intelligent teacher—would not the adoption of some such plan as we propose have a healthful influence both on himself and his pupils? Would it not relieve the tedium of the ordinary school routine, carried out as it is for the most part in confined apartments; and while opening out new sources of instruction and enjoyment, would it not lay the foundation of much future happiness? Let him fairly attempt to work out our suggestions, and we are sure of a satisfactory result.

XI. METHODS OF GIVING LESSONS ON OBJECTS.

Heads of a Lesson on a Vegetable Substance—The Cork Tree.

1. Particulars regarding external appearances, qualities, &c.
2. Where it is found. 3. How the substance is obtained or prepared.
4. Uses to which it is applied. 5. History.

Specimens of Notes illustrative of these Heads.

1. (a) *The Tree.* Two varieties of the cork tree—the narrow-leaved and the broad-leaved; attains the height of thirty feet; is an evergreen; has leaves of a bright colour; oval shape and indented edge; tree much like common oak in form, but more beautiful; called *quercus suber; quercus* means an oak-tree; *suber*, cork, or cork-tree.

(b) *Piece of Cork.* 1st. *The Parts*—has two ends, two surfaces, edges, &c. 2nd. *The Qualities*—light, porous, opaque, elastic, compressible, smooth, &c.

2. Found in southern parts of France; in Spain, but most abundant in Catalonia and Valencia; in Portugal; Italy; and Barbary, in Africa.

3. Cork is the outer bark of the tree; can be removed without injuring the tree; the best taken from old trees; that of young ones being too porous; taking off the bark called peeling, done every ten years; if inner bark removed, the tree would be destroyed; removed from tree by curved knife with two handles; slits are made from top to bottom, others across, then removed in large or small pieces; this depends on the number of incisions across. When taken off, soaked, and afterwards placed over a fire to char it; this blackens the surface, and closes the pores; thinner layers are not thus operated on, because charred cork is apt to give bad flavour to liquors stopped with it.

4. Used for stopping bottles and casks, because compressible and elastic; bungs and large corks more porous than small corks; pores of the latter lie across; floats of fishing-nets often made of cork; life-preservers; insuring buoyancy of life-boats; pieces fastened together form buoys; put between soles of shoes to keep out moisture, is impervious to water; on account of its lightness is made into false legs; when burnt, obtain Spanish black; great quantities made from the cork parings.

5. Use of cork for stopping bottles introduced about the 15th century; ancient Egyptians made coffins of it; principal exports from Valencia and Catalonia; duty on cork in a rough state in England, 8s. per cwt.; price per cwt. from £20 to £70.

Form of Questions.

1. How many varieties are there of the cork tree? State the difference between them. To what height does it attain? Describe the leaves. Explain what you mean by indented. What is the root of this word? What tree does the cork tree resemble? The proper name of cork tree. What does *quercus* mean? What do you mean by porous?—elastic?—compressible? Mention other objects having these qualities.

2. Where is the cork-tree found? Show me France on the map. How does Spain lie from France? What are Catalonia and Valencia? Show Italy, Barbary, &c.

3. What is cork? What is the best obtained from? Why are old trees better than young ones? How often is the bark stripped off? What word means taking off? How is the bark taken from the tree? Describe the whole operation. Why is the bark charred? What is an incision?

4. Why is cork used for stopping bottles? Why are small corks less porous than large ones? Mention other uses to which it is applied. Explain the words buoyancy and impervious. To what uses are cork parings applied?

5. Where does cork principally come from? What word means to bring in? What do you understand by duty? What is the duty on cork not manufactured? The value of cork per cwt.?

Remarks.

The upper classes should be required to write an abstract of the lesson. In order to assist them in this exercise, the teacher should write on the blackboard the *Heads of the Lesson*, numbering them as in the example given above. The children are not, however, to number their answers; but each answer is to be a consecutive account of

the object that has been described. They should also be accustomed to give distinct answers to separate questions; when this is done, both the question and the answer should be numbered. The following are examples of such questions:—

1. Write the particulars concerning the external appearance of the cork-tree.
2. Mention all the qualities of cork, and clearly explain the meaning of each term.
3. Explain the mode of obtaining and preparing cork.
4. Enumerate the uses to which cork is applied.

XII. HOW TO TEACH CHILDREN.

If you find an error in the child's mind, follow it up till he is rid of it. If a word is spelled wrong, be sure that the class is right before it is dismissed. Repeat, and fix attention on the exact error, till it can never be committed again. One clear and distinct idea is worth a world of misty ones. Time is of no consequence in comparison with the object. Give the child possession of one clear, distinct truth, and it becomes to him a centre of light. In all your teaching—no matter what time it takes—never leave your pupil till you know he has in his mind your exact thought.

XIII. SUGGESTIONS TO TEACHERS ON THE DUTIES OF THEIR PROFESSION.

From the Chief Superintendent's Circular of August, 1850.

Permit me first to say, value your profession. If you do not value it, others will not. But do not show your estimate of it, by assuming lofty airs, or making lofty pretensions; but by making yourself thoroughly master of it, by devoting your energies to it, by becoming imbued with its spirit. Let your actions speak, and let your heart feel. If an orator would have his audience feel, he must first feel himself; and if a Teacher does not feel, and does not give proof that he feels, the value and importance of his work, can he reasonably expect others to do so? We often hear it said, "Teachers are not respected." But is it not almost as often true, that teachers do not respect themselves—that they do not act respectably—that they themselves provoke the disrespect of which they complain. A Teacher cannot be made respectable by Act of Parliament. He must make himself so. In every ordinary employment of life, a man who acts upon high principles, and shows that he understands and values his business, will invariably command respect. Nor are the Teacher and his work an exception to the general rule. Nay, wherever a teacher has shown himself the possessor of noble principles, and that he understood and loved his work has he not commanded respect, and soon acquired commanding influence in the neighborhood of his residence? I am persuaded that the people of Upper Canada do not, to any considerable extent, disrespect teachers worthy of respect.

Then, if you value your profession yourself, employ the proper means to give it a place, not only in the esteem, but in the interest and sympathies of others. The profession of a Teacher is a means to an end; it exists not for the sake of the Teacher himself, but for the interests of society. It is a work indispensable to the progress and well-being of society. What is the Teacher's work? It is to develope the mind, to mould the heart, and to form the character of the future citizens, magistrates and rulers of our land! It is to teach and implant that which is the only true guarantee of liberty, order, and social stability—the essential element of a country's prosperity and happiness. Show that you sympathise with these objects—that your heart is in them—that your thoughts and aims do not terminate in yourself alone, but embrace others,—and especially encircle the rising generation. Such a spirit, like heat in the atmosphere, will be diffusive. Others will imbibe it; the indifferent will become interested, and the

selfish will begin to feel the impulses of intelligent generosity; parents will become increasingly anxious for the education of their children, and children will become increasingly anxious to be educated. In any neighborhood, both in town and country, where any youth are allowed to grow up uneducated, a Teacher should be an educational missionary as well as an educational pastor; and every instance of success will add to his influence and means of support, as well as usefulness. No class of men in the country will derive so large an individual advantage from the progress of society as School-teachers, and they ought to be intent in their efforts to excite every sentiment and feeling, and to procure and circulate every publication, which will tend to diffuse education and knowledge. A Teacher who folds his arms in slothful inactivity—neither improving in knowledge himself, nor advancing it among others—and yet complaining that no Hercules comes to his relief, deserves neither respect nor assistance; while the Teacher who nobly exerts himself in both acquiring and diffusing knowledge, will receive both emolument and respect, if not admiration and applause.

The mutual intercourse of Teachers—mutual visits to each others' Schools—forming, and meeting occasionally or periodically in Associations for mutual improvement, and the promotion of professional objects,—which are no other than public interests;—these and kindred measures, in connexion with professional reading* and industry, cannot fail to contribute much to the success, enjoyment, and social standing of teachers. Professional friendships will be formed; professional feeling will be enkindled; professional zeal and emulation will be excited; professional skill and usefulness will be improved; and Teachers will be more respected by the community at large, by thus evincing proper respect for each other. Faithful Teachers have already on their side the enlightened part of the community, the press, the pulpit, and the Legislature. Let them be true to themselves and to their profession. Lord Bacon has said truly—"Every man owes a debt to his profession."

I would also offer a word of caution against discouragement in your work, or disinclination to it, on account of its comparative obscurity. It is true, the circle of your daily labours is narrow, and the results of them are remote; there is little variety in your employment, and the monotony of it is only varied by quarterly examinations and short vacations. It therefore requires more than ordinary patience, perseverance and benevolence to pursue your work, month after month, and year after year, with unabated zeal and energy. Yet your work is now a public profession, recognized by law, and none but a Teacher examined and licensed according to law, is permitted to receive a farthing of the School Fund, any more than a person not examined and admitted to the Law Society, is permitted to practise as a Barrister at Law. And the results of the work performed in the humble school-house, though remote, will not be uncertain, and may one day appear in the highest position of a free people's gift, or in the most important affairs of a nation's diplomacy, or in the most honoured relations of parental and social life. The common school-house is the sole educational college for the vast majority of the present youth and future fathers and mothers of our country. That accomplished scholar and elegant writer, Dr. JARED SPARKS, [late] President of Harvard University, traces his early training, and several years of his apprenticeship in teaching, to the common school; and the great American statesman and orator, DANIEL WEBSTER, was accustomed to refer to the common school as his first *alma mater*, in which was laid the foundation of his future character. Through long months, and in retirement and solitude, the Italian painter occupied his brush on a single piece of canvas; but that canvas has, age after age, imparted instruction and delight to hundreds of thousands. For years did the Grecian sculptor,

* Local Superintendents and Teachers will be supplied with Educational Works relating to their profession from the Depository, Toronto, at the net catalogue price.

in almost exiled seclusion, employ his chisel on a single block of marble; but that marble has survived the wreck of empires, and still commands the admiration of the refined of all countries. Let the practical philosophy of these facts be engraved upon the heart of every right-minded Teacher, and it will sweeten his toil, and add fresh attractions to every successive year of his increasingly skilful and efficient labours.

IX. HINTS ON THE DUTIES OF LOCAL SUPERINTENDENTS.

Extracts from the Chief Superintendent's Circular to Local Superintendents, dated August, 1850.

I. The Local Inspection of Schools.

"To perform this duty with any degree of efficiency, a local Superintendent should be acquainted with the best modes of teaching every department of an English school, and be able to explain and exemplify them. It is, of course, the local Superintendent's duty to witness the modes of teaching adopted by the teacher, but he should do something more. He should, some part of the time, be an actor as well as spectator. To do so he must keep pace with the progress of the science of teaching. Every man who has to do with schools, ought to make himself master of the best modes of conducting them in all the details of arrangement, instruction and discipline. A man commits a wrong against teachers, against children, and against the interests of school education, who seeks the office of local Superintendent without being qualified and able to fulfil all its functions. In respect to the manner of performing the visitorial part of your duties, I have nothing material to add to the suggestions which I made in my circular to local Superintendents of Schools in December, 1846. They are as follows:

"Your own inspectson of the schools must be chiefly relied upon as the basis of your judgment, and the source of your information, as to the character and methods of school instruction, discipline, management, accomodation, &c.: and on this subject, we ought not to content ourselves with exterior and general facts. * * * * But it is not of less importance to know the interior regime of the schools—the aptitude, the zeal, the deportment of the teachers—their relations with the pupils, the trustees and the neighbourhood—the progress and attainments of the pupils, and, in a word, the whole moral and social character and results of the instruction given, as far as can be ascertained. Such information cannot be acquired from reports and statistical tables; it can only be obtained by special visits, and by personal conversation and observation—by an examination of the several classes in their different branches of study; so as to enable you to ascertain the degree and efficiency of the instruction imparted.

"In the inspection of schools, I would suggest something like the following order and subjects of inquiry and examination:

"I. *Mechanical Arrangements.*—The tenure of the property; the materials, dimensions and plan of the building; its condition; when erected; with what funds built; neighbourhood; how lighted, warmed, and ventilated; if any class-rooms are provided for the separate instruction of part of the children; if there is a lobby or closet, for hats cloaks, bonnets, book presses, &c.; how the desks and seats are arranged and constructed, and with what conveniences; what arrangements for the Teacher; what play-ground is provided; what gymnastic apparatus, if any; whether there be a well and proper conveniences for private purposes.

"II. *Means of Instruction.*—The books used in the several classes, under the heads

Reading, Arithmetic, Geography, &c.; the apparatus provided, as Tablets, Maps, Globes, Black-boards, Models, Cabinets, &c.

"III. *Organization.*—Arrangement of classes; whether each child is taught by the same teacher; if any assistant or assistants are employed, to what extent, how remunerated, and how qualified.

"IV. *Discipline.*—Hours of attendance; usual age of pupils;—If the pupils change places in their several classes, or whether they are marked at each lesson, or exercise, according to the relative merit; if distinction depends on intellectual proficiency or on a mixed estimate of intellectual proficiency and moral conduct, or on moral conduct only; what rewards, if any; whether corporal punishments are employed—[See No. 10, on page 103]—if so, their nature, and whether inflicted publicly or privately; what other punishments are used; whether attendance is regular; is school opened and closed with reading and prayer as provided in the regulations, and what religious instruction is given, if any.

"V. *Method of Instruction.*—Whether mutual or simultaneous, or individual or mixed; if mutual, the number of monitors, of what attainments, how appointed, how employed; if simultaneous, that is, by classes, to what subjects of instruction: whether the simultaneous method is not more or less mingled with individual teaching, and on what subjects; to what extent the intellectual, or the mere rote method is pursued, and on what subjects; how far the interrogative method only is used; whether the suggestive method is employed; whether the elliptical method is resorted to; how the attainments in the lessons are variously tested—by individual oral interrogation—by requiring written answers to written questions—or by requiring an abstract of the lessons to be written from memory.

"VI. *Attainments of Pupils.*—1. *In Reading;* whether they can read with ordinary facility, or with ease or expression. 2. *In Writing;* whether they can write with ordinary correctness, or with ease and elegance. 2. *In Arithmetic;* whether acquainted with Notation and Numeration, Addition, Subtraction, Multiplication, Division, and skilful in them; whether acquainted with the Tables of Moneys, Weights, Measures, and skilful in them; whether acquainted with the compound rules, and skilful in them; whether acquainted with the higher rules, and skilful in them; whether acquainted with the exercises in mental arithmetic, and skilful in them. 4. *In Grammar;* whether acquainted with its divisions, rules of orthography, parts of speech, their nature and modifications, parsing, composition, &c. 5. *Geography, History, Book-keeping, Vocal Music, &c.;* the order of questions suggested by the nature of the subject. The extent and degree of minuteness with which the inspection will be prosecuted, in respect to any or all of the foregoing and kindred subjects, must, of course, depend on circumstances.

"VII. *Miscellaneous.*—How many pupils have been sent to the Grammar School; whether a Visitor's Book and Register be kept as required; is the *Journal of Education* regularly received by the Trustees; are the Quarterly Examinations regularly held; are Prizes given in the School. *Library.*—Is a Library maintained in the Section; number of volumes taken out during the year; are books covered and labelled as required; are books kept in library case; is catalogue kept for reference by applicants; are fines duly collected, and books kept in good order; are library regulations observed."

II. Annual School Lectures.

Another most important duty required of each local Superintendent is, "*To deliver in each School Section, at least once a year, a public lecture on some subject connected with the objects, principles, and means of practical education.*" The education of a free people is, to a great extent, a system of voluntary exertion. There

may be a good school law, and there may be a large school fund; and yet education may decline. * * * The onward progress of the education of a country does not depend, primarily or chiefly, upon a school fund or school law, but upon the *spirit* and *action* of the *people*; and the great object of public school lectures is, to awaken that spirit and arouse this action. The law requires that a voice should be lifted up on this subject in every School Section in Upper Canada; the commanding authority of that voice will depend upon the ability, the industry, the *heart*, of each local Superintendent. No man ought to aspire to the office, or retain it a week, who has not the heart and ability to prepare and deliver public lectures in a spirit and manner worthy, in a good degree, of a cause interwoven with every vital interest of our country's civilization and happiness. We cannot be too strongly impressed with the fact, that the administration of the school system is not like that of any other department of the public service—a vigilant and effective oversight of the execution of the law, the protection and development of the country's resources; the due administration of the school system—and indeed, properly speaking, the great object of it, besides the ordinary administration of the law—is to excite and maintain, as widely and in as high a degree as possible, among all classes of the community, a correct appreciation of the nature and importance of popular education, and a spirit of intelligence, philanthropy and patriotism in the adoption of the diversified means necessary for the attainment of that end. From the office of the Chief Superintendent, down to the desk of the humblest teacher, a moral influence, an energy, a vitality should be sent forth in behalf of the education of youth and the diffusion of useful knowledge among the people. If the right spirit glow in the bosom of every Superintendent, it will appear in every public lecture, in every school visit, on every proper occasion in the intercourse of private and public life, and the results will soon be manifest in every municipality of Upper Canada. On the other hand, great must be the responsibility, and deep the disgrace, of any Superintendent, who shall suffer the interests of schools to droop and die, or linger in a sickly condition, under his oversight. * * *

III. Spirit of the Law in regard to the Office of Superintendent.

It remains with each incumbent to say whether the spirit and intentions of the law shall be fulfilled within his jurisdiction, as far as depends on the performance of the duties of his office. The act has been passed by the Legislature in the spirit of generous nationality: the spirit of patriotism prevailed over the selfishuess of party during the parliamentary deliberation on this subject. The Government duly appreciated the wants and interests of the whole country, in the preparation of the measure, and all parties in the Legislature cordially responded to it. In the same non-party and national spirit, I hope to see the law administered. * * * * In a "*Digest of the Common School system of the State of New York*," published in 1844, by the Deputy, under the auspices of the State Superintendent of Schools, I find the following remarks, which I commend to your serious attention:

"As the usefulness of Local Superintendents will depend mainly on the influence they shall be able to exercise upon the officers and teachers of schools, and upon parents and the inhabitants of districts generally, they will endeavour to deserve that influence by their deportment, and studiously to avoid everything which may impair it. Hence it will be indispensable that they should abstain wholly and absolutely from all interference in any local divisions, or in any questions by which the community in any town or district may be agitated; and although they cannot be expected to abandon their political sentiments, yet it is obvious that any participation in measures to promote the success of any political party, will not only diminish their influence and impair their usefulness, by exciting suspicion of the objects of their movements and measures, but will expose the

office they hold to a vindictive hostility, that will not cease until it is abolished. The intelligence of our people will not tolerate the idea of the agents of public instruction becoming the emissaries of partizan management."

The conviction expressed in the concluding sentences of this quotation has been painfully realized. As party politics ran high, it was found that the appointments of Local Superintendents were made, to a considerable extent, in the spirit of political partizanship, and the influence of the office was frequently employed for partizan purposes. A clamour was soon raised against the office itself, which resulted in its abolition in 1847. Great efforts have been subsequently made, by the State Superintendent and other experienced educationists, to restore the office of County (but not of Township) Superintendent, and place it on a better footing than heretofore. These facts are admonitory. A man's qualifications, irrespective of sect or party, should influence his appointment to the office; but when once appointed, and during his continuance in office, he should act in the spirit of impartiality and kindness towards all persuasions and parties. This has been the avowal of the Government, and the sense of the Legislature in regard to the office and duties of the Chief Superintendent; and I think it was equally understood and intended, that no tinge of partizanship should attach to the supervision of schools, even in the remotest township of the Province. The spirit of the vow made by the Prussian School Counsellor Dinter, should imbue the heart of every school officer in Upper Canada:—"I promised God that I would look upon every Prussian peasant child as a being who could complain of me before God, if I did not provide him the best education, as a man and a Christian, which it was possible for me to provide."

X. HINTS ON THE SUPERVISION AND INSPECTION OF SCHOOLS.

(By Thomas J. Robertson, Esq., A. M., Head Master of the Normal School, Toronto, and formerly Head Inspector of National Schools in Ireland.)

The legitimate end of school inspection is to obtain the most thorough information possible on all points connected with the school, and as the essential quality of a school is the instruction of the pupils in the departments of education, the first and principal point in the inspection of schools is a careful enquiry into the amount and quality of that instruction. In addition to this, there is a variety of other matters to be attended to. All the statistics of the school should be carefully examined into, such as the number of pupils on the books at the date of inspection, the highest number belonging to the school during the previous six months, the average attendance during that period or since the foregoing visit, the numbers learning the different branches, the fees, free school, &c. The state of the house and furniture also should be looked to, particularly with reference to repair and neatness, the supply of requisites and school apparatus noted, and the deficiencies accurately ascertained; and the description of books in use by the children examined, in order to prevent the introduction of any of an improper character, and to encourage a sufficient supply of those authorised by law. Too much pains also cannot be bestowed on the character and qualifications of the Teacher; these matters were of course attended to before his appointment; still, at every visit of a Superintendent, they should be taken note of, as a Teacher may fall into habits of immorality or neglect highly prejudicial to his school, or may omit to use the requisite exertion for his own improvement. A Superintendent should also watch closely the demeanour and bearing of the pupils in the school with the view of ascertaining the mode of control adopted by the Teacher, whether it is merely harshness, with its attendant slavish fear and sullen submission, or good-humoured firmness, with its concomitant, willing obedience. Such particulars will aid

him in forming a just estimate of the attention paid to the moral training of the pupils, for which purpose he should also see them at their sports, if possible.

Of the necessity of a careful inspection of schools no reasonable doubt can be entertained, were it only on the ground that the conduct of all who receive the public money should be in some shape or other open to enquiry and inspection. The most advantageous method of conducting this enquiry can, I think be pointed out in a few words:—the Superintendent, at each visit, should examine all the classes in every department of education in which they may be receiving instruction. Of these examinations he should keep careful notes to enable him to compare the result of each with that of the preceding.

These notes should have reference to all the details connected with the school, but more especially to the number of pupils engaged in the different branches of study, and their proficiency in each. By this means the Superintendent will be enabled to form a tolerably accurate estimate of the progress of the school in all essential particulars.

In forming such an estimate, however, various particulars should be taken into account—such as the general backwardness or otherwise of the locality, the previous habits of the children, and above all, the regularity or irregularity of the attendance; all of which have a direct influence on the advancement of the school. Perhaps the most active of these is the nature of the attendance, and a few observations thereon may not be deemed irrelevant.

There are very many circumstances materially affecting the attendance of pupils at Common Schools. In some places the labor of the children is so valuable on the farm or in the house, that they cannot be spared; occasionally insufficient clothing is the alleged excuse; but in most instances the real cause is the apathy of the parents, which is such as to render them altogether indifferent to the subject. This is unhappily too frequently the case; and this feeling is usually the immediate cause of that irregularity of attendance, which so frequently obstructs the progress of rural schools, and renders it so difficult for an Inspector to form a just estimate of that progress.

It will often occur, that, of twelve children present in a certain class at one examination, only one-third will be found at the following, though the class may be greatly increased in numbers. Under such circumstances, of course, a Superintendent can form little or no judgment of the improvement of that class, the majority being pupils whom he has not before examined; and he will have to consult the records of the school to ascertain the number on whose answering he may depend to enable him to form a comparative estimate. Indeed, it will be found useful in every instance, before commencing the examinatian of a class, to scrutinize the School Register, and observe how far the different individuals of the class have attended regularly or otherwise. If the Superintendent do not possess some information on this point, he can scarcely fail to do injustice to the Teacher, who is accountable for the improvement of the scholars, but whose efforts must necessarily be materially impeded by the irregularity alluded to. It is the more requisite also to attend to this particular, as inefficient and careless Teachers perpetually quote the defect in question as a cause for the backwardness of their pupils.

In conducting the literary examination, great care and attention are requisite. A mere series of questions on the particular subject under consideration is by no means all that is necessary. The duty of a Local Superintendent is not merely to ascertain the acquirements and improvement of the pupils, but to afford information to the Teacher on every point connected with the management of his school; and one of the most important of these points is the mode of teaching.

And here I may mention the two particulars on which the well-being of a school may

be said chiefly to depend, and which should consequently claim special attention from the Superintendent; they are, mechanical and intellectual training. In the former are included all the various details of discipline, the classification of the pupils, a careful division of time for each object of study, regularity in passing to and from the desks, mode of standing when engaged in any lesson, particularly the due inculcation of habits of neatness and order, &c. Intellectual training enables the Teacher to address himself to and educate all the faculties of the mind, instead of depending altogether on the memory. It is exercised to most advantage in classes, and the great secret then is, to awaken and keep alive attention, which may easily be effected by a spirited energetic method and unvarying good temper on the part of the Teacher. Whenever such a mode of teaching by lecture is adopted, each individual of a large class, will be found to learn more speedily, and with greater ease to himself, than he would alone.

To all these points the attention of the Superintendent should be carefully directed. Besides examining the classes himself, he should require the Teacher to give instruction in his presence, with the view of being enabled to form a satisfactory estimate of his efficiency, he should endeavour to make each visit a source of gratification to the pupils, and in general require the school during his inspection to go as nearly as possible through its usual daily course. For this purpose he should call out each class himself, observe how far the pupils adhere to the required discipline, and show themselves familiar with it from constant practice, coming out from their seats without confusion, and arranging themselves in their accustomed places with regularity and precision. He should ascertain by personal examination, not merely the literary progress of the classes, but how far that progress has been produced by the adoption of system. He should be careful to do all this without entertaining, and above all, without exhibiting, any suspicion of the Teacher's efficiency. Certainly the mere fact of the necessity of inspection on the one hand infers the possibility of neglect on the other; but it would be most ungracious and unfair to proceed at once, as if impressed with the conviction that such neglect existed.

All this can be effected by the exercise of good humoured kindness, coupled with firmness and tact; indeed, I know no qualifications more essentially necessary for a Local Superintendent of Schools than these. I have known Inspectors, partly from natural temperament, partly from a mistaken desire to discharge their duty strictly, exhibit so much harshness in the course of their visits, as absolutely to terrify both scholars and Teacher, and consequently in the end to leave the school with a most unfavourable impression of its merits. This is in every sense unjust and unwise, and should be most carefully avoided. The Teacher should invariably be treated with courtesy and respect, particularly in presence of his scholars, and whenever a Superintendent may deem it necessary to find fault, it should always be in private, and with kindness as well as firmness; any other course will lessen the Teacher's authority, and consequently impede his utility. Besides being a public servant, the Teacher, as well as the Superintendent, is an officer appointed by law to administer the system under which they both act, and no difference of official rank should for an instant be admitted as an excuse for a harsh and overbearing exercise of authority.

In addition to his actual duties in the school, as above alluded to, a Superintendent should endeavour to make himself acquainted with the feeling of the neighbourhood on the subject of education, with the view of removing prejudice, supporting the authority of the Teacher where necessary, and obtaining such local information as will enable him to afford valuable advice and suggestions on the occurrence of occasional difficulties. The more kindly feeling a Superintendent exhibits towards the Teachers and pupils in his district, and the more anxious he shows himself for their welfare, the more efficient and valuable will his services be, provided of course that he is in other respects competent.

In the arrangement of a system of school inspection, there are two material points deserving of consideration; one is, the number of inspections that should be given in each year, and the other, the propriety of giving previous notice of each visit. On both these, but little deliberation is requisite to enable any one of sufficient experience to arrive at a correct conclusion.

For the purposes I have named, fewer than four Inspections each year will be found insufficient. I speak with reference exclusively to the superintendence of the appointed officers, and without consideration of the visits of individuals or committees in the neighbourhood locally interested.

With reference to the other point, the expediency of giving previous notice, I have no hesitation in stating my conviction, that such a practice must, to a certain extent, defeat some of the objects of inspection; one of which confessedly is to see the school in its every day working order, otherwise the Inspector is deceived, and a false impression produced on his mind. It is scarcely possible for the best Teacher, if informed of the intended visit of the Superintendent, to avoid preparing for it, and the more carefully in proportion to his anxiety to produce a satisfactory result. He has the school-room cleaned up, the children warned to attend punctually, and their personal appearance specially looked to. He also sends round to collect all his scholars, and thus the school is exhibited under the aspect it may be made to assume by undue preparation for a particular purpose, but which may be, and usually is, very different from its general condition; and the Teacher unconsciously injures himself by introducing among his classes a number of children, belonging doubtlessly to the school, but who, having attended irregularly, and been called in only for that particular day, are unable to answer with the requisite precision. Moreover, such a mode is apt to foster a system of general slovenliness by affording opportunities for preparation on show days, and also offers to ill inclined Teachers great facilities for deception. Nor can any Teacher justly complain that by not receiving previous notice he is defrauded of the means of exhibiting his school to the best advantage; the true test of the superiority of his school undoubtedly being its fitness for inspection at any moment. Moreover, Teachers should recollect, that the object of such inspection is not to afford them opportunities for display, but to procure satisfactory evidence as to the real state of the schools for those appointed to administer for the public benefit the funds allocated by the state for the education of the people.

I am aware that the mode of inspection now described in general terms would occupy considerable time; in fact, a well-organized school of fifty children cannot be satisfactorily examined under two hours and a half; and one of a similar size, but undisciplined, and under a Teacher unaccustomed to improved methods of teaching, would require a much longer space, from the necessity of affording to such a Teacher the requisite information and instruction. But I have spoken throughout with reference to inspection in general, without limitation to any particular country, and under the conviction that the important and onerous duties of school inspection in a large district are sufficient to occupy the time and engross the attention as thoroughly as can possibly be the case in any other profession.

I need scarcely add that the above remarks are of a general character, all minute details being omitted,—my object being to bring specially under notice the consideration of a thorough system of supervision, embracing a careful examination of the schools, conducted with uniformity of action as regards method of teaching and school organization, that thus the improvements going on around us may be generally introduced, the deserving teacher brought prominently forward, and the standard of popular education gradually elevated.

NOTE.—The specific heads of inquiry and examination in the inspection of schools, are given in detail in the extract from the Circular of the Chief Superintendent to Local Superintendents on pages 158, 159.

XI. SELECTIONS FOR RECITATION IN SCHOOLS.

Part I. Extracts from Canadian Speeches and Addresses.

From successive volumes of the *Journal of Education* for Upper Canada, we have made the following Selections and Extracts, for the use of pupils in these Grammar and Common Schools in which public speaking and recitation form a part of the weekly exercises. These selections are divided into three classes: The first contains extracts from various speeches and addresses delivered by public men in Canada. The second are English and Miscellaneous Extracts from other sources, which have been published in the *Journal;* and the third embraces a few of the pieces of poetry which have appeared from time to time in that periodical.*

I. THE RELIGIOUS PRINCIPLES OF OUR PUBLIC SCHOOL SYSTEM.

Extract from Lord Elgin's Speech on the occasion of laying the foundation stone of the Upper Canada Normal School Building, 2nd July 1851.

Sir, [addressing the Chief Superintendent] I understand from your statements—and I come to the same conclusion from my own investigation and observation—that it is *the* principle of our Common School educational system, that its foundation is laid deep in the firm rock of our common Christianity. I understand, sir, that while the varying views and opinions of a mixed religious society are scrupulously respected, while every semblance of dictation is carefully avoided, it is desired, it is earnestly recommended, it is confidently expected and hoped, that every child who attends our Common Schools shall learn there that he is a being who has an interest in eternity as well as in time; that he has a Father towards whom he stands in a closer, more affecting and more endearing relationship than to any earthly father, and that Father is in heaven; that he has a hope far transcending every earthly hope—a hope full of immortality—the hope, namely, that that Father's kingdom may come; that he has a duty which, like the sun in our celestial system, stands in the centre of his moral obligations, shedding upon them a hallowing light which they in their turn reflect and absorb,—the duty of striving to prove by his life and conversation the sincerity of his prayer, that that Father's will may be done upon earth as it is done in heaven. I understand, sir, that upon the broad and solid platform which is raised upon that good foundation, we invite the ministers of religion, of all denominations—the *de facto* spiritual guides of the people of the country—to take their stands along with us. That, so far from hampering or impeding them in the exercise of their sacred functions, we ask and we beg them to take the children—the lambs of the flock which are committed to their care—aside, and to lead them to those pastures and streams where they will find, as they believe it, the food of life and waters of consolation. Permit me in conclusion to say, both as an humble Christian man, and as the head of the Civil Government of the Province, that it gives me unfeigned pleasure to perceive that the youth of this country, of all denominations, who are destined in their maturer years to meet in the discharge of the duties of civil life upon terms of perfect civil and religious equality—I say it gives me pleasure to hear and to know that they are receiving an education which is fitted so well to qualify them for the discharge of those important duties, and that while their hearts are yet tender, and their affections green and young, they are associated under conditions which are likely to promote among them the growth of those truly Christian graces—mutual respect, forbearance and charity.

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* This portion of the pamphlet can be had in a separate form. Price $1.50 per dozen.

II. LORD ELGIN'S VALEDICTORY AT SPENCER WOOD.

For the last time I am surrounded by a circle of friends with whom I have spent some of the pleasantest hours of my life. For the last time I welcome you as my guests to this charming residence, which I have been in the habit of calling my home. I did not, I will frankly confess it, know what it would cost me to break this habit until the period of my departure approached, and I began to feel that the great interests which have so long engrossed my attention and thoughts were passing out of my hands. I had a hint of what my feelings really were upon this point—a pretty broad hint too—one lovely morning in June last, when I returned to Quebec after my temporary absence in England, and landed at the cove below Spencer Wood, and when with the greeting of the old people in the cove, who put their heads out of the windows, as I passed along, and cried "welcome home again" still ringing in my ears, I mounted the hill and drove through the Avenue to the house door. I saw the drooping trees on the lawn, with every one of which I was so familiar, clothed in the green of spring, and the river beyond, calm and transparent as a mirror, and the ships fixed and motionless as statues on its surface, and the whole landscape bathed in a flood of that bright Canadian sunshine which so seldom pierces our murky atmosphere on the other side of the Atlantic. I began to think that those persons were to be envied who were not forced by the necessities of their positions, to quit those engrossing retreats and lovely scenes, for the purpose of proceeding to distant lands, but who are able to remain among them until they pass to that quiet corner of the garden of Mount Hermon, which juts into the river and commands a view of the city, the shipping, Point Levi, the Island, Orleans, and the range of Laurentine hills, so that through the dim watches of that tranquil night which precedes the dawning of the eternal day, the majestic citadel of Quebec, with its noble train of satellite hills may seem to rest for ever on the sight, and the low murmur of the waters of the St Lawrance, with the hum of the busy life on their surface to fall ceaselessly on the ear. I cannot bring myself to believe that the future has in store for me any interests which will fill the place of those I am now abandoning. But although I must henceforward be to you as a stranger; although my official connection with you and your interests will have become in a few days a matter of history, yet I trust that through some one channel or another the tidings of your prosperity and progress may occasionally reach me, that I may hear from time to time, of the steady growth and development of those principles of liberty and order, of manly independence in combination with respect for authority and law, of national life in harmony with attachment to British connection which it has been my earnest endeavor, to the extent of my humble means of influence, to implant and to establish among you.

III. THE MONARCHICAL PRINCIPLE IN CANADA.

Extract from the speech of the Honorable Sir John Beverly Robinson, Bart., Chief Justice of Upper Canada, at the inauguration of the Normal School—December, 1852.

It is common for us to hear of that great experiment in government in which the vast republic near us is engaged. But in Canada, and other provinces of British North America, we have an experiment of our own going on, in a smaller way to be sure, but still on a scale that is rapidly expanding—and an experiment of no light interest to our glorious mother country, or to mankind. We occupy a peculiar and somewhat critical position on this continent, and more than we can foresee may probably depend upon the manner in which our descendants may be able to sustain themselves in it. It will be their part, and it is now ours, to demonstrate that all such freedom of action as is consistent with rational liberty, with public peace, and with individual security, can be enjoyed under a constitutional monarchy as fully as under the purest democracy on earth—to prove that, in proportion as intelligence increases, what is meant by liberty

is better understood, and what is soundest and most stable in government is better appreciated and more firmly supported. The glorious career of England among the nations of the world demands of us this tribute to the tried excellence of her admirable constitution; it should be our pride to shew that far removed as we are from the splendours of Royalty and the influences of a Court, monarchy is not blindly preferred among us from a senseless attachment to antiquated prejudices, nor reluctantly tolerated from a sense of duty or a dread of change; but that on the contrary, it is cherished in the affections, and supported by the free and firm will of an intelligent people, whose love of order has been strengthened as their knowledge has increased —a people who regard with loyal pleasure the obligations of duty which bind them to the Crown, and who value their kingly form of government not only because they believe it to be the most favourable to stability and peace, but especially for the security it affords to life and property, the steady support which it gives to the laws, and the certainty with which it ensures the actual enjoyment of all that deserves to be dignified with the name of freedom.

IV. PROGRESS OF BRITISH AMERICA.

(*Extract from the conclusion of the foregoing Speech.*)

I close these observations by adverting to the very remarkable period in the history of this Province at which the Normal School of Upper Canada has taken possession of its magnificent home. We are advancing with a rapidity that surprises ourselves, scarcely less than the people of other countries who have been suddenly awakened to the truth of our astonishing, but inevitable progress. It was but a few weeks ago that I read in one of the leading English periodicals, an article written expressly for the purpose of impressing upon the British public a due sense of the importance of the North American Provinces, and of the great interests which with surprising rapidity are springing up within them, and claiming the attention of the mother country. In order to give force to his statements, the writer of this article speaks of it as a matter of surprise, that the British North American Provinces contain among them a population of not less than 1,700,000 souls; not imagining, that Canada alone contained nearly 150,000 more people than he gave *credit for to all these* Provinces.—In all of these extensive Colonies of the British Crown, distinguished as they are by a loyal and generous appreciation of their position as a portion of the British Empire, the same spirit of enterprize is at this moment in active employment with the aid of singular advantages, in developing their great national resources. Every thing that we can see and feel at the present time, or can discern in the future, is full of encouragement to the farmer, the mechanic, and the labourer,—and as for the liberal professions, it is impossible that they can languish among a prosperous people. The multiplying calls for intelligence in the varieties of employment which are daily increasing—the wonderful cheapness and facility which improvements in the art of printing have given in the production of books and newspapers, and the quickened circulation of intelligence which we derive from liberal postal arrangements and the magic wonders of the telegraph, must make the necessity of being able to read and write so great, and the desire so nearly universal, that the few who may remain without such instruction will be made to feel the marked inferiority of their position. And soon it will be literally true that in Upper Canada there will be no excuse for any person endowed with orninary capacity, being found in a condition so degrading to a freeman, and so unsuitable to an accountable being. With everything to urge and to tempt them to the acquisition of knowledge, and everything to aid them in obtaining it, it will be impossible that the people of Canada can do otherwise than feel that in their case emphatically "*poverty and shame shall be to him that refuseth instruction.*"

V. CULTIVATION OF THE MORAL AND INTELLECTUAL FACULTIES, THE TRUE SOURCE OF NATIONAL GREATNESS.

(*Extract from the Speech of the Hon. W. H. Blake, Chancellor of the University of Toronto, at the convocation—December*, 1854.)

We have a fertile soil and a salubrious climate, and we live by the favour of Providence under free institutions, which secure to us that most inestimable of all privileges, civil and religious liberty; and we enjoy all under the fostering care of that mighty empire, of which it must ever remain our greatest glory that we form a part. But what will any or all of these advantages avail us if our moral and intellectual faculties are suffered to lie dormant. True national greatness is not the necessary growth either of fertility of soil or salubrity of climate. Look around the globe and you will find everywhere fertile regions once the abode of civilization and art, now sunk to the lowest point of poverty and degradation, while the barren island and pestilent marsh have become the seats of empire and wealth. Look at Holland or at Scotland—consider what these countries have been, and what they now are; and then look at the past history and present condition of Spain, or of Italy, and you will find the contrast a melancholy proof of the truth of the statement. Melancholy in truth it is, but full of instruction and full of hope, for it demonstrates with unmistakeable clearness that it is to the cultivation of his moral and intellectual faculties that man owes all his god-like pre-eminence. And when these faculties are suffered to lie dormant; when the human mind becomes stunted, the nations, like individuals, sink by the inevitable law of our nature to the level of the beasts that perish. If it be an object then to lay the foundation of true national greatness—if we desire to achieve for ourselves a position among the nations of the earth, like that of the glorious empire to which we belong—if we hope to stand out even as she now stands out, pre-eminent, not only in power, but in the grandeur of her intellectual being, we must imitate the example and walk in the footsteps of our forefathers. We must elevate the national mind by the careful cultivation of our moral and intellectual faculties. We must cherish the art by which habits are reformed and manners embellished. We must implant the love of truth, of beauty and renown in the hearts of our people. And having accomplished this, we can indulge the confident hope that we may one day point to our long line of heroes and statesmen, of philosophers and poets, only less glorious than that which adorns the annals of our native land.

VI. THE DIFFUSION OF EDUCATION IN CANADA.

(*Extract from the Speech of the Rev. Dr. M'Caul, President of University College, Toronto, at the opening of the Normal School, December*, 1852.)

I have said that the diffusion of the blessings of education throughout the land is the ultimate end of the work which is to be pursued within these walls,—a work second in importance to none in the province, for it is destined to perpetuate its benign influences throughout successive generations. Yes, the stamp which education impresses, however faint at first, or difficult of recognition, remains permanent and enduring, and continues indelible from age to age,—so that whatever be the national characteristics of the population of Canada, the influence of that system of instruction now established will be perceptible in its distinctive features. What mind can justly estimate—what tongue can adequately express—the benefits which must flow from such a diffusion? What influence will it have in strengthening the intellect, elevating the taste, and curbing the passions? And oh! how many are there who if they had but had the avenues of enjoyment thrown open to them which education presents, would never have fallen into the grovelling habits which have ruined both themselves and their families. But in another

respect too, the diffusion of education must exercise a most important influence throughout the country. We live in times when the tendency is to a diffusion throughout the masses of a greater amount of political privilege than has hitherto been conceded to them. The times exist when the majority of the people must exercise political privileges, and if so, of what immense importance is it that the masses should be educated—that they should know their rights and understand their obligations—that they should possess that power, which education gives, of protecting themselves against religious or political impostors—that they should discharge those duties, which our free constitution assigns to them, with that independence and discrimination which knowledge bestows and fosters. Of what consequence is it that our people should understand and be prepared to show, that they maintain their allegiance to the British Crown and their adherence to the limited monarchy under which they live, not through any antiquated prejudices, nor yet through any traditionary veneration, but because they prefer that which they have, entertaining the well grounded conviction that under a government such as that of England, they and their children can enjoy all real liberty, and under it have happiness here, and the means and opportunity of preparing themselves for happiness hereafter.

VII. SUCCESS IN ITS HIGHEST SENSE—A PROOF OF TRUE GREATNESS.

(*Extract from the speech of the Revd. Dr. M'Caul, Vice-Chancellor of the University of Toronto, at the Convocation, December,* 1854.)

When I speak of success [in presenting these certificates of honor] I do not merely mean the success in competition—the success of one candidate over another, although I believe that beneficial results arise from this honorable competition; and am persuaded the Almighty has implanted in our nature a desire for distinction with wise and good objects, in order that it may be the means of producing benefit both to man himself and to his fellow-beings. But it is in a far higher sense that I speak of success. I speak of that success which I doubt not some of you have had—of that triumph which you have achieved over the temptations of indolence and the blandishments of vice; of that success over straitened circumstances which may have impeded some of you in your course; of that success which has attended some of you in the hard struggle to overcome those difficulties which poverty may have thrown in your way. Such success I deem to be the development of that spirit of resolute determination, of that patient self-denial and steady perseverance, which produced the *mascula proles* of the olden time, and which has supplied the parent state with so many illustrious men, whose names add lustre to the bright pages of British glory Such a spirit realizes the conception of the Satirist, for it would prefer the labors of a Hercules to the sumptuous banquets and voluptuous ease of a Sardanapalus. This success is not generally regarded with that high honour which I wish to attach to it, and yet sure am I that such triumphs over difficulties and impediments are the genuine proofs of true greatness of character. They are as far superior to physical triumphs as the spiritual nature of man is superior to his corporeal. They have not, it must be owned, the concomitants which excite the attention and the admiration of the crowd—they have not the pomp and circumstance of glorious war—they are unaccompanied by the pealing trumpet, the booming gun or the flashing banner, and yet I hesitate not to say that such triumphs over moral difficulties and impediments –such successes over the enemies of our spiritual welfare—the foes to our mental improvement, are equal, if not superior to anything that has ever been eulogized in the noblest strains of poesy, or celebrated in the most glowing language of historic prose.

VIII. CANADIAN PROSPERITY, A CAUSE OF THANKFULNESS—A RALLYING POINT.

(*Extract from the speech of the Rev. Dr. M'Caul at the anniversary dinner of the St. George's Society, Toronto*, 1853.)

"When I consider the advance of the country in education and in other important elements of greatness and of prosperity, I must say that I feel but little sympathy with those who indulge in mournful recollections of what they have left, or querulous complaints of their present position, instead of acknowledging the advantages which they enjoy, or looking forward to the bright future which is before them. Let us consider for a moment what are the leading characteristics of this fair land of our adoption. A fertile soil, amply rewarding labor in the abundance and diversity of its produce; a salubrious climate, calculated to rear a hardy and vigorous race; water communication by noble rivers and vast lakes (or rather Mediterranean Seas), unequalled in the world; and millions of acres of unoccupied land, able to support millions of additional immigrants. Let us add to these natural blessings, the results of the energy and enterprise of an active and intelligent population; our cities with all the convenience and comforts of European towns of twice their population, and twenty times their age; our villages springing up where lately there were but dense forests or uncultivated wastes; the remotest points of this extensive country soon to be connected by railroads, now either drawing to completion, or in progress, or guaranteed; the facilities afforded for the education of our children by our common schools, our grammar schools, our private seminaries, our colleges, and our universities; the progress of knowledge, advanced by the scientific and literary societies and institutes established in our cities and towns; the solemn duties of religion inculcated by fixed ministrations or by the occasional visits of the missionary; the voice of prayer and praise rising each Sabbath alike from the stately piles in our towns, which rear their spires towards heaven, and the lowly shanty, which scarce lifts its humble head under the leafy arches of our backwoods; and all this with the full enjoyment of the blessings of civil and religious liberty, conferred by our own free constitution, and secured by our connection with that glorious empire of which we form a part. In my opinion, the language of dissatisfaction or complaint but little becomes those who enjoy such advantages. Thanksgiving is rather our duty—thanksgiving to Him from whom all blessings flow, for what in His abundant mercy He has given to us, and prayer to the same Almighty Being for contentment with what we have—for peace, wherein we may use and enjoy what His bountiful hand has provided for us. By peace, I mean not freedom from war—not tranquillity undisturbed by aggression from without—of that I have no fears; but I do mean freedom from internal strife, from civil commotion, from the injurious influences of bickerings and contentions with each other. I do mean that peace which is produced by mutual forbearance—by laying aside national feuds and party differences, and by the union of all,—casting aside their distinctions, whilst they still hold fast to their principles—for the advancement of the welfare of their common country, the land of the Maple Leaf! Nor do I know any more appropriate words in which this supplication can be offered, than those, which must be familiar to many whom I address, and in which I doubt not all will cordially join—that "we may live in the fear of God, in dutiful allegiance to the Queen, and in brotherly love and Christian charity each towards the other."

IX. CANADIAN PATRIOTISM THE LEVER OF CANADIAN GREATNESS.

(*From an Editorial by the Rev. Dr. Ryerson, in the Journal of Education for March*, 1850.)

It cannot be too strongly impressed upon every mind, that it is on Canadian energy, Canadian ambition, Canadian self-reliance, skill and enterprise,—in a word, on Canadian patriotism—that depend Canadian prosperity, elevation and happiness. The fact that some men, by honest and intelligent industry, as tradesmen, mechanics, farmers, merchants, and professional men, have risen from poverty to comfort, and even affluence, shows what others might have done by equal honesty, intelligence and industry. In agricultural productiveness, Canada is superior to New York; in water-power and hydraulic privileges it is equal to any of the New England States; in lumber it is a contributor to both the American and English markets; its mineral resources are ample to supply its own implements of industry, as its cattle and flocks are equal to its wants for labour, food and clothing. Its sky is as clear as that of Italy, and its climate as healthy as that of Germany; its institutions are even freer than those of England, and its administration of justice confessedly more independent and impartial than that of the United States. The social and material advancement of Canada in former years was confessedly slow; but compare its progress for the last ten years in any and every respect with that of any of the neighbouring States from Maine to Michigan, apart from the advantages which some of them possess as being the sea-ports and thoroughfares for other States, and the results will be honourable to Canada. Compare everything progressive in those States which is not adventitious but which depends upon home industry and enterprise, and Canada, with all its faults and short-comings, has much more reason to be proud than to be ashamed. It is true Canadian Hippiases have done much to disturb and retard its interests; but this spirit of conspiring against one's country instead of consulting and maintaining its honour and interests, like an Aristides and a Conon, even in exile, is as alien to the general feeling as it is hostile to the best interests of Canada. But in as far as this spirit exists—this spirit of crying to Hercules instead of helping oneself—Canadian enterprise will be damped, the value of Canadian securities and property will be depreciated, and Canadian progress impeded. In the days of Grecian self-reliance, unity and patriotism, that little peninsula of half the territorial extent of Canada, repelled the most numerous armies recorded in history, and defied a power whose domains extended from the Indus to the Ægean, and from the Euxine to the cataracts of the Nile. Let each Canadian love his country and seek its glory as did the ancient Greeks, during the era when private patriotism and public virtue was inscribed upon their national escutcheon. We have no strife of foreign war—no hostile rivalship of nations;—our warfare is a domestic, bloodless one—a warfare of virtue against vice, of knowledge against ignorance, of self-dependence against foreign dependence, of public spirit against personal littleness, of the love of Canada as ourselves, instead of the love of self against Canada; of the dignified and generous industry of a Cincinnatus, instead of the selfish and protean adventures of an Alcibiades. Surely if

> "The shuddering tenant of the Frigid Zone
> Proudly proclaims the happiest spot his own;
> The naked negro, panting on the line,
> Boasts of his golden sands and palmy wine;"

all true Canadians can say to the genial land of their birth or adoption,

> "Our bosoms with rapture beat high at thy name,
> Thy health is our transport—our triumph thy fame."

X. THE TRUE ELEMENTS OF SOCIAL ADVANCEMENT IN CANADA.

(*Extract from an Address on the Social Advancement of Canada, by the Rev. Dr. Ryerson—October*, 1849.)

It is my earnest prayer, that the "internal guard" of a truly *Christian* education may be planted in the heart-citadel of every youth of our land. It is the union of moral and intellectual qualities which adorn and elevate the individual man; and it is their united development which constitutes the life and strength, the happiness and progress of society. If then we wish to see our country accomplish its high destiny—our unbroken forests converted into waving wheat fields—single manufactories growing into prosperous towns, and towns swelling into cities—canals and railroads intersecting the various districts, and commerce covering the rivers and lakes; if we wish to see our institutions settled and perfected, and our Government fulfilling its noblest functions—our schools and colleges radiating centres of intellectual light and moral warmth to the youthful population—the poor as well as the rich properly educated, and a rich and varied home literature created—the experience of past ages giving lessons in all our domestic dwellings, by means of books and libraries;—in a word, if we wish to see the people of Canada united, intelligent, prosperous and happy—great in all that constitutes the real grandeur of a people—let us feel that the eventful issues of that anticipated futurity are in our hands, and that it is for each individual of our grown-up generation to say how far these hopes of patriotism and philantrophy shall be realized or disappointed. Above all, let us never forget that there is a moral as well as physical universe, and as it is in the harmony of the two that the perfections of the divine character and government are fully displayed, so it is in the harmonious development of the *moral* with the intellectual man that the perfection of his nature consists. What God has joined together we must never put asunder in any of our plans and efforts for the social advancement of Canada. Our motto should be the words of the inspired Isaiah—"*Wisdom and knowledge shall be the stability of thy times—the possession of continued salvation; the fear of Jehovah, this shall be thy treasure.*"—[*Bishop Lowth's Translation.*]

XI. THE GREAT VALUE OF INVENTIONS AND DISCOVERIES.

(*Extract from an Address, by the Rev. Dr. Ryerson, on Canadian Mechanics and Manufactures—January*, 1849.)

Very few of those who have distinguished themselves as the authors of discoveries, inventions and improvements in mechanical science, have enjoyed greater advantages of leisure and resources, than can be commanded by the majority of mechanics in Upper Canada; and yet what unspeakable benefits have those humble men conferred upon the human race! To select only a few illustrations. Who can conceive the political and social revolutions which have already resulted from the European discoverer of the magnetic needle,—that sleepless, unerring, faithful little pilot, unblinded by the starless midnight and unmoved by the raging tempest,—which at once relieved the mariner from his timid creeping from headland to headland, and among its first feats opened the commerce of India, and guided Columbus to the discovery of a new world—the most important event in the history of modern nations and modern civilization. What mind can imagine the results to mankind, in every department of science and knowledge, in every aspect of civilization, and in every interest of civil freedom and social advancement, which emanated from the humble inventor of the Art of Printing,—an art which seems to be but in the mid career of its improvements, and whose magic power appears destined at no remote period to penetrate yet unexplored regions of humanity, and to transform

the institutions and society of every uncivilized nation of the globe. The cotton manufacture of Great Britain may almost be said to date its commencement, as a branch of national industry and commerce, with Arkwright's invention in spinning machinery, soon followed, as it was, by Cartwright's invention of the power loom. Before Arkwright's invention, the whole annual amount of the cotton manufacture of Great Britain did not exceed £200,000; now it amounts to forty millions of pounds per annum! Then the raw cotton manufactured amounted to about four millions of pounds per annum; it now exceeds two hundred millions! Aided by this machinery, one person can now perform the work of two hundred and sixty-six persons before its invention. And if Arkwright's spinning machinery invention has added to the manufacturing industry of Great Britain what is equal to the labour of forty millions of human beings—twice the entire population—Watt's inventions and improvements in the steam engine, in its application to the manufactures alone, adds the power of more than one million of men, and, in connection with other machinery, performs an amount of labour, according to Dr. Buckland's estimate, "equivalent to that of three or four hundred millions of men by direct labour," besides its achievements on the continent of Europe and in the United States, in almost every branch of mechanical and manufacturing industry—and besides its navigation of the rivers and oceans and seas of the whole globe—thus changing the social condition of man. Take another illustration in the *bleaching* of linens and cottons. Formerly this was a process of six or eight months duration; and so little was it understood in Great Britain, that nearly all the British manufactured linens and cottons were sent to Holland, and bleached upon the fields around Haarlem. But by the application of chlorine, the property of which to destroy vegetable colours was discovered by a Swedish philosopher in 1774, the process of several months is reduced to that of a few hours.

And what advantages have accrued to mankind from Franklin's brilliant discovery of the identity of the lightning of the clouds, and the electricity produced by a piece of silk-rubbed sealing-wax—in consequence of which the thunder cloud is rendered harmless; and this very electricity is now employed as the medium of thought, with the rapidity of thought, between distant cities and countries. As late as 1789, a hope was expressed by the Southern members of the American Congress, that cotton might be grown in the Southern States, provided good seed could be procured. Shortly after, a Connecticut mechanic by the name of Whitney invented the Cotton-gin, for separating the seed from the fibre—an invention which has trebled the value of all cotton-growing lands in the Southern States, while it has given birth to a most important branch of American commerce and manufacture. How many thousands of lives have been saved by the safety-lamp of Sir Humphrey Davy; and how much are our comforts increased and our interests advanced by the discovery of carburetted hydrogen gas, by which common coal is made the brilliant illuminator of our streets, our shops, and dwellings.

And while there is an unmeasured field of improvement and prosperity spread out before us in the landscape of the future, we are not to suppose that there remains nothing for us to achieve in the field of discovery and invention. The steam-engine itself may be but in the infancy of its perfection; the locomotion of the present may be but a snail's speed to the locomotion of the future; and the most admired inventions and machinery of the present age may be thrown aside as useless in comparison of the inventions and machinery of a coming age. Unknown principles, and elements, and powers, now mysteriously operating around us, may be to our descendants what the mechanical agencies of air and steam are to us; and the past progress in the arts and sciences may be only the introduction to future advancement. May Canada share largely in the honors and benefits of that advancement; and may the generations of

future ages rank many of her mechanic sons with the Watts and Arkwrights, the Franklins and Fultons of past ages!

XII. DUTIES OF EDUCATED MEN IN CANADA.

(*From an Address at a Convocation of McGill College, July*, 1856, *by the Principal, J. W. Dawson, Esq., LL.D.*)

Every educated man should endeavor to add something to the extent of human knowledge or wisdom by original investigation. Many men, amidst the pressure of professional pursuits and of narrow circumstances, have toiled to accumulate those treasures by which your own minds have been enriched. The wide fields of literature and of abstract and applied science lie before you; select some favorable spot, cultivate in your leisure moments, and you may hope to repay to those who follow you some portion of that debt which you owe to those who have gone before.

Further, every educated man should be an educationist. Regard all other Universities as kindred institutions, laboring in the same great cause. Nor should you neglect the interests of the humbler sources of learning. Good common and grammar schools nourish our colleges, and colleges foster the schools; and both united furnish the best means for the real elevation of any people. Let it be your endeavor to maintain large and enlightened views on this subject in opposition to the narrow prejudices which tend to excite division where there should be the most complete unity of effort.

Every educated man should also be a man of public spirit, taking a warm interest in all that tends to promote the material, social, or political welfare of his country; and it is especially your duty to all in your power to develope, in this country, those British political institutions, which, in their happy combination of security with progress, so far excel those of all other ages and nations, and which it seems the special province of Canada to work out in their application to new circumstances and conditions.

Lastly, allow me earnestly to urge a supreme regard to our holy christian faith. It is one of the most lamentable of all spectacles to behold a young man of liberal education and of respectable abilities, with high hopes and prospects, burying all in the mire of intemperance and sensuality; and it is almost as sad to see such a man looking with cold unconcern on his highest spiritual interests, or joining the scoffer in his ridicule of the sacred things which he does not comprehend. I trust that you, on the other hand, will endeavour to attain to that highest style of man, the Christian gentleman, earnest and zealous in every good work, forbearing under provocation, humble in every position in which he may be placed, cherishing in his heart the love of his God and his Saviour. May God grant that this may be realised in you, and that useful, honoured, and happy lives may conduct you to a glorious immortality.

XIII. YOUNG MEN OF CANADA, THE HOPE OF THE COUNTRY.

(*From an Address at Hamilton, July*, 1856, *by the Rev. William Ormiston, M.A.*)

What a large wide happy home is the land we live in! We have found it a goodly land, and have no sympathy with those who love it not! There is no piety, no genuine Christianity, in the heart of him who does not love his country, native or adopted! He cannot be a true, large, leal-hearted man, who looking through the vista of coming years, does not hope to see his own country grow greater and more glorious; and he is no true Canadian who does not cry, in the words emblazoned on my left, "Peace and Prosperity to Canada." There are those around me, doubtless, who sympathise with the poet who wrote these lines a few years ago:

"They say thy hills are bleak,
They say thy glens are bare—
But oh! they know not what fond hearts
Are nurtured there.

"Scotland! I love thee well,
Thy dust is dear to me—
This distant land is very fair,
But not like thee."

It matters not on what line of latitude or longitude it may be, one's native land should be the dearest, sweetest, and most hallowed spot on this side of heaven. Canada, our country! we love it; and because we love it, we wish you, young men, to be worthy of it. Our fathers have done much. They came from almost every country beneath the sun. They were a varied people; and we are, to some extent, varied still. Their national, educational, and ecclesiastical prejudices were varied. They had but one thing to bind them together;—the deep fertile soil beneath their feet, and the clear canopy of the bright blue sky above their heads. Pioneers in this goodly land, some have found a home—many only a grave, and on the resting-place of these we should tread lightly, doing reverence to their ashes, and living so as to honor them. With you, young men, I arm for the conflict, and gird myself for the coming struggle. We are the strength of the country. Upon us it depends whether, in twenty years, this country shall be progressive, and rise to assume its own just place in the heraldry of nations, and have the proud boast of possessing a God-fearing people; whether it shall become a dark spot in the geography of the world, and, by and by, vanish altogether; or whether intelligence and industry shall place Canada in the vanguard of nations.

XIV. HOME AND THE DOMESTIC AFFECTIONS.

(From an Address at Ottawa, July, 1856, *by the Rev. Mr. Johnston, of that City.)*

Home is the paradise of this terrestrial life. For there it is where all that is great and good, all that is noble and refined, all that permanently fits man for the fulfilment of the object of his creation ought first to be imparted to his thoughts, and interwoven with his affections and his desires. Other institutions of life may be good, but it is the well regulated institution of domestic life, and the proper government of home, that most deeply and permanently affects the well-being of mankind. Where the institutions of home government are defective, in vain will be the enactment of wholesome laws, or the efforts of an active police, or the establishment of public educational institutions, or the unsheathed sword of military power. On the other hand, where the fountains of moral life are purified by the principles inculcated at home, though other laws of society may be defective, and other institutions either faulty or inoperative—yet, like the waters of a stream issuing from a pure fountain, the manners of a people may now and again become partially polluted, but the stream which continues to flow from the fountain will wash the defilement away. Then may we not be permitted to assume that among the first and most imperative duties of man, after the worship he owes to his Maker, is the proper cultivation and government of the domestic affections and relations of life. Happy are the people whose religion inculcates, as a duty, the sacred obligations of social life. Happy are the people whose public laws give countenance and support to such teachings of religion. Happy are the people whose rulers set the example of reverence, for such teachings, and obedience to such laws. And truly blest is that nation, where, gathered around the domestic hearths of its palaces and its cottages, are a people who revere the pure, the hallowed, and the ennobling affections of parents and children, and all the domestic relations of home." It is true, the happiness, prosperity, and strength of a nation spring from those fountains which have their sources at the hearthstones of the people. If

these sources are not true to nature,—if the affections of domestic life are not cherished at these firesides, then must that nation take an inferior rank in comparison with others, whose soldiers fight for home, their altars, and their firesides.

And who can doubt that the happiness of mankind is not essentially interwoven with the domestic affections. In earliest childhood it is seen. That happy little group collected on their play-ground, or around their toys, whose joyous laugh, whose faces, radiant with delight, prove that they find exquisite pleasure in their sports—enjoy their pleasure only while affection or kindness regulates their play. And if some angry word, some passionate blow, inflict pain or grief upon the child, where does he go for comfort? —to his mother. In her arms, her loving voice, her fond caress, her consoling words quickly sooth him, and before the tear-drop has vanished from his eye, the last remnant of grief has flowed from his breast. Happy child to have a mother to fly to—happy mother, whose magic can charm her darling's grief away. And here, amidst this joy, let us drop one tear of sorrow over those little ones who have none on earth whom they can call father or mother,—whose orphan childhood must receive sympathy and sustenance from the hands and hearts of strangers. Yet they have a friend, who hath said, "leave thy fatherless children to me; I will take care of them." To such the eye of pity and the hand of affection should be extended.

And, in your hours of play, brothers, do not think that because you are stronger it is unmanly to be gentle to your little brothers and sisters. True nobleness of heart and true manliness of conduct are never coupled with pride and arrogance. When I see a young man kind and respectful to his mother, and gentle and forbearing to his sisters, I think he has a noble heart.

XV. LOYALTY TO THE QUEEN.

(*Extract from a Speech at Toronto, in* 1844, *by the Hon. William Young of Nova Scotia.*)

Our attachment to the Queen, our own Victoria, is mingled with a tenderness not inconsistent with the sterner sentiment, which it softens and embellishes without enervating. Let her legitimate authority as a constitutional Monarch; let her reputation as a Woman be assailed, and notwithstanding the lamentation of Burke that the age of chivalry was past, thousands of swords would leap from their scabbards to avenge her. Ay, and they would be drawn as freely, and wielded as vigorously and bravely in Canada or in Nova Scotia, as in England. Loyalty, love of British Institutions! They are engrafted in our very nature; they are part and parcel of ourselves; and I can no more tear them from my heart (even if I would, and lacerate all its fibres,) than I would sever a limb from my body.

XVI. THE UNITED EMPIRE LOYALISTS.

(*From the Toronto Globe, December,* 1855.)

How little is known of the "pre-historic annals" of Canada! A belief that there settled on the shores of the great lakes, about the time of the Revolution, a number of men and women distinguished by the name of the American Loyalists, is the sum of the knowledge on the subject possessed by many in Canada. What brought them here, whence they came, how they did, what they suffered, are questions seldom asked, and seldom answered. Nor shall we reply to them further than by saying, that these people were devoted subjects of the British Crown, who would not and did not join in the war of Independence, but took up arms for the United Empire, and who, when the victory went with the colonists, refused to abandon their allegiance, suffered the confiscation of all their earthly goods, and went forth, in 1783, to seek a home in the wilderness of

Canada. No bar sinister stains their escutcheon. They were men of whom we need not be ashamed. The United Empire Loyalists form an ancestry of which any people might be proud. They had every characteristic which can go to constitute an enduring substratum for a coming nation. They were men, of whom the descendants of contemporary foes now utter disinterested eulogies. Respecting them even prejudice is dead, and the grand-child of the Revolutionist can now speak generously of the political opponents of his ancestors in the land where their honor was tried as in a crucible. They are our Pilgrim Fathers. They are our heroes. They were martyrs to their principles. Believing that a monarchy was better than a republic, and shrinking with abhorrence from a dismemberment of the empire, they were willing, rather than lose the one and endure the other, to bear with a temporary injustice. And their sincerity was put to the test. They took up arms for the king; they passed through all the dangers and horrors of civil war; they bore what was worse than death itself—the hatred of their countrymen; and when the battle went against them, they sought no compromise, but forsaking their most splendid possessions, upreared the banner to which they had sworn fealty, and, following where it led, went forth to seek, on the then inhospitable shores of Ontario, a miserable shelter, in exchange for the home from which they were exiled. Nor did they ever draw back. The Indian, the wolf, the famine, could not alter their iron resolution; and for their allegiance, they endured a thousand deaths. They lost every treasure but their honor, and bore all sufferings but those which spring from self-reproach. It may be said by some, that all men now admit the revolt of the American Colonies to have been a just one. And such we believe it was. But if George the Third played the tyrant, that makes nothing against our loyalist fathers. They were not tyrants, but faithful subjects; and we are bound to believe that they acted conscientiously, for their lives and fortunes were staked on the issue of the contest. As provincials, they had the right to make what choice they pleased. The dispute affected themselves. They might be in error as to the use of the prerogative, but that creed cannot be a tyrannical one, by which we will to manage our own affairs. A man cannot be a tyrant to himself. George the Third acted despotically; but the Loyalist Fathers were of another mind; and in acting upon their convictions in the very face of ruin, we know that they were sincere.

In reality these men need no defence. But as some view the history of that period in another light, and condemn all who, two generations back, did not think with themselves, we deem it not an idle thing to vindicate the Heroes of the Province from the unjust remarks which have often been made about them, and to urge their claims on our filial respect. It will be remembered, too, by all Canadians, that these men's deeds have been narrated by their enemies. But this will not do. The Loyalists are our own men—our forefathers. Their reputation is ours. We must put ourselves, therefore, in their circumstances, defend them where we can, and honor them always. Nor in doing so, is there any need for us to abandon any principle. We have nothing to do with the points in which we differ. It is our business to honor them for those in which we are agreed.

The Americans have set us an example in this direction. Their Puritan Fathers are held in perpetual remembrance. Men make pilgrimages to the place where they landed, and Plymouth Rock is now their monument. And yet the American people do not agree in every iota with these worthies. There are many who see in their principles room for difference, and in their conduct, some things to censure. Precisely similar should be our treatment of our loyalist fathers. There are points in which we differ from the opinions which they held seventy years ago, but we can all agree in admiring their attachment to the Mother Country, and the patient sincerity with which they suffered for their loyalty. Thus we should venerate them. Nor can we believe that the growing intelligence of the Province will fail to produce some one patriotic enough to

tell the world a tale of lofty principle and noble sacrifice, which when set forth as veritable history, will kindle a healthful glow in every bosom. No people has made a figure in the life of nations without its heroes, and the loyalist fathers are the heroes of Upper Canada.

XVII. THE STABILITY OF OUR EDUCATIONAL SYSTEM.

(*From an Address at New York, August,* 1855, *on Popular Education in Upper Canada; by Mr. Hodgins, Deputy Superintendent.*)

The principles upon which our elementary school system are founded having been more than once affirmed by the electors of the Province; it has not been considered sound policy to subject so vital an interest and so sacred a cause to the caprice of the ever-varying current of political strife, unless its very existence were imperilled by rude and unpatriotic hands. Besides, the teachings of history have shown us that no great public concern, involving the highest destiny of a nation, and beset with difficulties requiring patient and delicate treatment, can ever be brought to a successful issue, where the master-mind directing it is liable to be changed at every adverse breath of public opinion. The renowned Michael Angelo alone perfected the colossal proportions of St. Peter's, and the genius of Sir Christopher Wren alone sketched the noble structure of St. Paul's. The fitful efforts of a succession of great men have never effected any noted or permanent good equal to that produced by the sagacity, prudence and foresight of a single will, unceasingly directed to its accomplishment. Wellington's renown is undivided. It is the unity of purpose conspicuous in the lives and deeds of all great men which makes their names stand out in bold relief through successive generations. Even in the political history of the United States, the great principle here stated receives a striking illustration. The founders of the federal constitution, knowing that the spirit of their own heroic times could not always remain to guard their national liberties, chose out their wisest master builders, and when the edifice was reared, they enacted that their own impress should remain upon it for ever, or be changed only by the two-thirds vote of a mighty nation. It is true that the permanent efficiency of our educational system is not held to be of so much importance, as is the preservation of our political liberties; yet how little is it practically considered, that to that efficiency alone, aided by the influence of the Gospel, are we indebted, under Providence, for the very existence of the civil and religious freedom which we enjoy!

XVIII. OUR EDUCATIONAL FUTURE AND RESPONSIBILITIES.

(*From the conclusion of the foregoing Address.*)

Having sketched our educational history, from its earliest dawn, in 1789, down to the present time, I can only, from the past, point to the future,—which, with all its solemn grandeur and mystery, lies before us. But no mortal hand can lift the veil that shrouds it; for to us that future has been irrevocably sealed. It has been beautifully said, that the veil which covers the face of futurity has been woven by the hands of mercy. Our conjectures of the future can only therefore be founded upon the past, and our hopes and anticipations of that future alone brighten when the halo of the past is reflected upon them.

We may glance along the history of nations, and survey with a thoughtful eye the mighty contests, the civil commotions, and the fearful up-heavings which have rent these nations asunder, and have destroyed their power for ever. We can even contemplate their intellectual achievements and their unrivalled skill in the arts, but we look in vain for a parallel to our own times. Here "a new spirit stands before" us. As if tired of the spirit of war, the love of conquest, and the stately pomp of courts, we see each nation putting forth all her energy and strength to uplift the masses of the people to the dignity

of the Christian citizen. Schools are multiplied; the abstruse sciences of the alchemists of the days of chivalry are unfolded even to the capacities of the child; the Bible is circulated in every land, and in every tongue; and the profoundest intellects of the day are engaged in rendering attractive the hitherto sealed book of popular instruction and enlightenment. But who, from such a stand-point, ever caught a glimpse of the distant goal before us? Or who, from so brilliant a past, has ever gazed upon its corresponding future? Not one! Down the vista of history we see the rise and fall of nations, the beginning and ending of wars, the failures and the perfections of art, but the end of that mighty contest between light and darkness, that great experiment of the age in which we live, we have never yet witnessed. Nor shall we ever see it. On us, as nations, and on us as individuals, devolves, however, the solemn responsibility of guiding, directing and counselling (each in the sphere in which Providence has placed him) in the great work in which we are all engaged, fervently imploring that "wisdom and counsel and might" be imparted to the nations promoting so momentous an interest, and that the blessing of Almighty God would abundantly rest upon the exertions of all Christian men engaged in that noble cause and labour of love—the free and universal Education of the people!

XII. SELECTIONS FOR SCHOOL RECITATIONS.

Part II. English and Miscellaneous Addresses.

I. SCIENCE AND SOCIAL PROGRESS.

(*From a Speech at Birmingham, in* 1855, *by His Royal Highness Prince Albert.*)

No human pursuits make any material progress until science be brought to bear upon them. We have seen, accordingly, many of them slumber for centuries; but from the moment that science has touched them with her magic wand, they have sprung forward, and taken strides which amaze and almost awe the beholder. Look at the transformation which has gone on around us since the laws of gravitation, electricity, and the expansive power of heat have become known to us! It has altered our whole state of existence—one might say the whole face of the globe! We owe this to science, and science alone; and she has other treasures in store for us, if we will but call her to our assistance. It is sometimes objected by the ignorant, that science is uncertain and changeable; and they point to the many exploded theories which have been superseded by others, as a proof that the present knowledge may be also unsound, and, after all, not worth having. But they are not aware that while they think to cast blame upon science, they bestow, in fact, the highest praise upon her. For that is precisely the difference between science and prejudice: that the latter keeps stubbornly to its position, whether disproved or not; while the former is an unarrested movement toward the fountain of truth—caring little for cherished authorities or sentiments, but continually progressing—feeling no false shame at her shortcomings, but, on the contrary, the highest pleasure when freed from an error, at having advanced another step towards the attainment of Divine truth, a pleasure not even intelligible to the pride of ignorance. We also hear, not unfrequently, science and practice—scientific knowledge and common sense—contrasted as antagonistic. A strange error! For science is eminently practical, and must be so, as she sees and knows what she is doing; while mere common practice is condemned to work in the dark—applying natural ingenuity to unknown powers to obtain a known result. Far be it from me to undervalue the creative power of genius, or to teach shrewd common sense as worthless without knowledge. But nobody will tell me that the same genius would not take an incomparably higher flight, if supported with all the means which knowledge can impart—or that common sense does not become, in

fact, only truly powerful when in possession of the materials upon which judgment is to be exercised. The study of the laws by which the Almighty governs the universe is, therefore, our bounden duty. These laws are most important branches of knowledge—their study trains and elevates the mind. But they are not the only ones: there are others which we cannot disregard—which we cannot do without. There are, for instance, the laws governing the human mind and its relation to the Divine Spirit—the subject of logic and metaphysics. There are those which govern our bodily nature and its connection with the soul—the subject of physiology and psychology. More which govern human society and the relations between man and man—the subjects of politics, jurisprudence, political economy, and many others. While of the laws just mentioned, some have been recognised as essentials of education in different institutions; and some will, in the course of time, more fully assert their right to recognition. The laws regulating matter and form are those which will constitute the chief objects of your pursuits; and as the principle of sub-division of labor is the one most congenial to our age, I would advise you to keep to this specially, and to follow, with undivided attention, chiefly the sciences of mechanics, physics, and chemistry, and the fine arts in painting, sculpture, and architecture. But these Divine laws are capable of being discovered and understood, and of being taught and made our own. This is the task of science; and while science discovers and teaches these laws, art teaches their application. No pursuit is, therefore, too insignificant not to be capable of becoming the subject both of a science and an art. The fine arts—as far as they relate to painting and sculpture, which are sometimes confounded with art in general—rest on the application of the laws of form and labor, and what may be called the science of the beautiful. They do not rest on any arbitrary theory on the modes of producing pleasurable emotions, but follow fixed laws, more difficult, perhaps, to seize than those regulating the material world, because belonging partly to the sphere of the ideal and our spiritual essence, yet perfectly appreciable and teachable, both abstractedly and historically, from the works of different ages and nations.

II. THE RISE AND FALL OF NATIONS.

(From a Speech at Bedford by the Right Honorable Lord John Russell.)

There have been many causes assigned for this rise and fall. Many states have fallen because they were too small to contend against their more powerful neighbors; because it is obvious when surrounding states have 100,000 or 200,000 men under military discipline that the smaller ones with ten or twenty thousand will fall under the superior force of the other. We have the case of Athens and the case of Florence, then I might allude to the great state of Germany and the smaller one of Portugal. I need scarcely allude to England, because this country is large enough and strong enough to maintain itself for ages to come. But there is another source of decline, and which is celebrated in a line of the Roman Satirist, as the immediate cause of the fall of the Roman Empire, which, after stretching its armies into almost every part of the world, fell from the effects of luxury. But there are other causes which it behoves us to consider, which have occasioned the decline of nations. There have been despotic institutions, where men have been forbidden to investigate subjects of science, or discuss any improvement in art—where they have been forbidden, under penalty of fire, from holding any religious opinion different from that of the State. Where that despotism has existed—where that persecution has prevailed, the nation has withered under the influence. Where such principles prevail, the state will always be unstable; but I say there can be no danger to the people of this country on that account, appreciating as they do the liberty of thought and of expression which they enjoy, and who would not under any consider-

ation surrender that liberty to any power whatever. There is another cause which greatly tended to the decay of ancient nations, which introduced many crimes, caused a weakening of the manly character, and a falling off of the fortitude and industry which distinguished the early period of history. There was the institution of slavery—that institution which led the Romans to neglect the true interests of the empire, resulting in crime, which led them to leave the cultivation of the land to slaves—those lands which at an earlier period received cultivation from the hands of freemen. But happily those changes are not felt by this country; so far as our dominions are concerned, we have got rid of that curse. In an early period we find that the church spoke out strongly against the maintenance of slavery; and at a later period we have practically improved upon it, and those who carry on occupations of various kinds, whether agricultural, commercial or manufacturing in our dominions, are free from the curse of personal slavery. We have, therefore, a recognition of those mutual obligations upon which the ancient nations divided themselves, and which, as may be pointed out in the history of nations, cannot affect our personal safety. There are also other sources of decline—from the consequences of political events, from the calamities of war, from struggles long continued, from other objects of national interest, and other motives, the effect of which no person can perceive, and upon which no man would ever be entitled to your confidence, or the confidence of a nation, if he pretended to prophesy. These are subjects connected with the future, the knowledge of which is not given to man. Events may come to pass and contradict and overrule all his anticipations; but upon that subject you and your successors have a duty to perform as well as hopes to realise. It behoves you to maintain the liberty of this country, to maintain the Christianity of this country, and my belief is, that by cultivating your minds, by extending as much as possible your researches, whether in science, whether in literature, you will contribute to that end, you will strengthen the religious and political institutions of the country.

III. DEVELOPMENT OF THE INTELLECTUAL QUALITIES AND MORAL FEELINGS.

(*From a Speech at Manchester, in* 1856, *by the Right Honorable Viscount Palmerston.*)

The intellectual qualities as well as the moral feelings of our nature are scattered broadcast over the face of the earth. We find them everywhere, in the lowest classes as in the highest. Their development depends on the opportunities which are offered for their culture, and it is to the literary and scientific institutions that we are indebted for the facilities which are so advantageously presented. In this country, fortunately, the road to wealth and to honors is open to all. Some of those among us who have filled the most distinguished situations have sprung from the humblest position, and have raised themselves by their talent and good conduct. Man is endowed with a double nature—the moral and the intellectual. Both contribute to his pleasure and happiness; his moral enjoyments are independent of external support. They begin with his home, and constitute his domestic attachments; extending a little further, they assume the character of friendship; in a wider range they become love of country and of patriotism, and with a still further development they take the shape of benevolence and philanthropy. Those pleasures are within the reach of every man; but while no man needs assistance to enable him to enjoy that happiness which consists in the exercise of his affections, his intellectual qualities do require assistance for their development. It is true that knowledge is power, and assuredly those who afford to all classes the means of acquiring that knowledge, even to a limited amount, contribute not merely to their advancement in life

but also to their innocent and laudable enjoyments. We have often heard quoted the words of one of our great poets, that

> ' A little learning is a dangerous thing,
> Drink deep or taste not the Pierian Spring."

I hold that this is a mistake. The more knowledge a man has the better, but if his time and the means at his disposal do not permit of his acquiring deep and accurate knowledge, let him have as much as he can, and, depend upon it, he will be all the better for it; for, although he may not be able to drink deeply of that spring, if his lips have once tasted of it he will go back to the same delicious waters whenever he has an opportunity, and his draughts, be they great or small, will refresh his fancy, invigorate his intellect, raise him in the scale of civilization, contribute to his individual happiness, and make him a more useful and honorable member of society. Of all sciences the mechanism of the universe is that of which a man who has a little leisure at his disposal may most easily obtain an insight by the knowledge of those facts which are the result of deep study and careful calculation. An ignorant man believes that his country is the only one in the world, that this planet is the only great portion of creation, that the sun is placed in the firmament merely to warm him, the moon to light him home, and the stars to amuse him on the journey, but when he is led into the secrets of that vast universe, the contemplation of which fills the mind with awe, his views become liberal and enlightened, his mind is raised above the ordinary grovelling ideas of life, and he finds himself a superior being to what he had been before. It is clear, therefore, that institutions which promote such desirable objects are eminently deserving of the support of the people. They tend to bring together the different classes of society, combining them in the bonds of good fellowship, allaying their jealousies, mitigating their asperities, and causing them to work together in harmonious action for the general benefit of the commonwealth.

IV. PRACTICAL VALUE OF A COMPLETE AND RATIONAL EDUCATION.

(*From a Speech at Oldham, in* 1856, *by the Right Honorable Lord Stanley.*)

It seems to me—that the foundation of a complete and rational education lies in the knowledge of natural laws, as deduced from recorded facts; a knowledge, first of those laws by which the inorganic world is governed—as those which regulate astronomical, geological, and chemical existences—a branch which includes physiology in all its departments; lastly, a knowledge of that which, for want of a more recognised term, I must call sociology, embracing the investigation of social problems, and enabling us to trace the paths along which human action has moved in all countries and ages. I may be asked what man, unless solely and professedly a philosopher, can find leisure for such inquiries? I reply, it is not necessary to be an astronomer, a geologist, a chemist, a physiologist, in order to learn what have been the principal results of human thought in those departments, or what is their inter-connexion one with another. The slow progress of discovery affords no measure of the time required to appreciate the results of discovery. It takes ages to make the road which when made, may be travelled over in a few years. If interrogated as to the use of such investigations, I would point out that the two great questions which an intelligent mind, on beginning to reflect, naturally puts are these, "What am I?" and "What is this universe around me?" To give an answer, however partial and incomplete to these queries, has been the effort of the human intellect during more than 3,000 years, and may be for 3,000 more. No man is so dull that they do not interest him; none ever has been, or ever can be so acute that they do not perplex and baffle him. In addition to such reflections, we should not forget the practical applications of science, for in these

applications we have doubled the wealth and power of England, and incalculably lessened the pressure of human suffering from material causes. In education I look to the practical effect which it is likely to produce on life; and, although I know well that theory is one thing, practice another, yet I do believe (to take one instance of many) that if men knew a little more about the air they breathe, and the water they drink, there would be a saving of many lives now destroyed or shortened by deficient sanitary arrangements. So again, if men understood better the functions of the brain, there would be fewer deaths from overwork, from mental excitement, or even from intemperance. Generally speaking, I believe, that for one person who breaks a physical law with a full clear conscience that he is breaking it—knowing what he is doing and foreseeing the consequences—there are 100 who break these laws in sheer ignorance, and whom a little knowledge would render cautious. So again, when I said just now that it seemed to me unnatural that a man should be held to be fully educated, who knew not the first elements of legal science, I did not, and do not suppose, that law should be studied by a layman as it is by a lawyer. But every man, though it may never happen to him to have to set foot within a court of justice, has something to do with evidence: it is surely of use to every one to know when an improbable tale is told him in a matter which concerns his interests, what are the chances of that tale being true or false; and in works which treat of evidence, those chances are minutely analysed, and the collective results of many men's experience is brought to bear on the subject. Again, dealing with another branch of social science, I may venture to say even here, that if the first rules of political economy had been a little better understood, both by governments and communities, the worst sufferings which have prevailed in these manufacturing districts (some of them self-inflicted, some of them the faults of others) might have been avoided, or to a great extent diminished.

Human Action the End of All Teaching.

To sum up in a word, I mean this—that the end of all human teaching is human action; that that teaching is most valuable which tends to direct and economize action; that such teaching must concern itself mainly with two things—the laws which govern inanimate nature, and the laws which govern man; and that whatever does not add to our knowledge on one or other of these subjects is, comparatively speaking, of little value. And herein, as I think, one great merit of popular literary institutions consists, that, being tied down by no statutes, no founders' wills, no traditions of immemorial antiquity, they not only supply instruction to the people, but they supply that kind of instruction for which a popular demand exists. They follow the national taste; they do not, in attempting to direct that taste, pervert it. Long may this state of things endure; and in education, as in other matters, may the transition from past to present habits of thought take place, as in this country such transitions mostly do, by no demolition of that which exists, by no sudden disruption of ancient ties, but by the greatest and almost imperceptible accommodation of all intelligent minds to that, which all persons see to be inevitable in the course of events!

V. ST. PAUL AT THE ACROPOLIS OF ATHENS.

(*From the Earl of Carlisle's "Diary in Turkish and Greek Waters,"* 1854, *pp.* 151, 257.)

What is admirable and wonderful at Athens, is the harmonious blending of every detached feature with each other,—with the solemn mountains, the lucid atmosphere, the eternal sea,—all wearing the same unchanged aspect as when the ships of Xerxes were shivered on that Colian Cape beneath: as when the slope of the Acropolis was covered with its Athenian audience to listen under this open sky to Œschylus and Sophocles, to

the Agamemnon or the Œdipus; as when St. Paul stood on the topmost stone of yon hill of Mars, and while summit above and plain below bristled with idols, proclaimed, with the words of a power to which Pericles could never have attained, the counsel of the true God. Let me just remark, that even the impressive declaration of the Apostle, that "God dwelleth not in temples made with hands," may seem to grow in effect when we remember that the buildings to which he must have almost inevitably pointed at that very moment were the most perfect that the hands of man have ever reared, and must have comprised the Theseum below and the Parthenon above him. It seems to have been well that "art and man's device" should be reduced to their proper level, on the very spot of their highest development and glory. It is wholly fanciful to think, that, in presence of St. Paul, on this spot of the Areopagus, something of allowance as well as of rebuke was conveyed to the surrounding associations of the scene? The direct and immediate object of his appearance and address here, was undoubtedly to annul the false sanctities of the place, to extinguish every altar, strip every shrine, and dethrone every idol. This object has been achieved with entire success. Whatever may have been substituted in the interval, we may feel a reasonable confidence that on the rock of the Acropolis, paganism can never be reseated. The words of the man "weak and contemptible in bodily presence," spoken on that rocky brow, amidst the mocking circle, still live and reign, while tongues, and races, and empires have been swept away. But the pre-eminence of the true faith being thus secured, it surely need not be with the abandoned shrines of Hellas, as with the uncouth orgies of barbarous tribes, or the bloody rites of human sacrifice. It could not have been without providential agency, that within the narrow and rugged circuit, hemmed in by the slopes of Parnes, Pentelicus, and Hymettus, were concentrated the master efforts of human excellence, in arts and arms, in intellect and imagination, in eloquence and song. The lessons of the Apostle have taught mankind that all other beauties and glories fade into nothing by the side of the cross; but, while we look at the cross as the law of our life; while we look to that Apostle on the hill of Mars, at Athens, as the teacher whose words of truth and soberness have superseded the wisdom of all her sages, and the dreams of all her bards, then, if then only, it will be lawful for us to enjoy the whole range of subordinate attractions. It will be felt not to be without its import that St. Paul himself did not refuse to illustrate Gospel truth by reference to human literature; nor without its import, too, that those who did most to revive the express teaching, and exhibit the actual spirit of St. Paul, Luther, Melancthon, and their brother reformers, would have been conspicuous as the revivers of classical literature, even if they had not been the restorers of scriptural faith. And so for us, too, the long line of the Panathenaic procession may seem to wind through the portals of the Propylæa, and ascend the steps of the Parthenon; for us the delicate columns of the unwinged victory may recall the lineage of Miltiades and the shame of Persia. For us the melodious nightingale may still pour her plaint in the green coverts of the sparkling colonos; and hill, and plain, and grove, and temple, may feed us unrebuked with their thronging images of the past glory and the living beauty.

VI. THE GREEK AND LATIN AUTHORS COMPARED,

(*From Sir Edward Bulwer Lytton's address before the Associated Societies of the Edinburgh University*, 1854.)

Dignity and polish are the especial attributes of Latin literature in its happiest age; it betrays the habitual influence of an aristocracy, wealthy, magnificent, and learned. To borrow a phrase from Persius—its words sweep long as if clothed with the toga. Whether we take the sonorous lines of Virgil, or the swelling periods of Cicero, the

easier dignity of Sallust, or the patrician simplicity of Cæsar, we are sensible that we are with a race accustomed to a measured decorum, a majestic self-control, unfamiliar to the more lively impulse of small Greek communities. There is a greater demarcation between the intellect of the writer and the homely sense of the multitude. The Latin writers seek to link themselves to posterity rather through a succession of select and well-bred admirers than by cordial identification with the passions and interests of the profane vulgar. Even Horace himself, so brilliant and easy, and so conscious of this *monumentum ære perennius*, affects disdain of popular applause, and informs us with a kind of pride that his satires had no vogue in the haunts of the common people. Every bold school-boy takes at once to Homer, but it is only the experienced man of the world who discovers all the delicate wit, and the exquisite urbanity of sentiment, that win our affection to Horace in proportion as we advance in life. In short, the Greek writers warm and elevate our emotions as men—the Latin writers temper emotions to the stately reserve of high-born gentlemen. The Greeks fire us more to the inspirations of poetry, or (as in Plato and parts of Demosthenes) to that sublimer prose to which poetry is akin; but the Latin writers are perhaps on the whole, though I say it with hesitation, safer models for that accurate construction and decorous elegance by which classical prose divides itself from the forms of verse. Nor is elegance effeminate, but on the contrary nervous and robust, though, like the statue of Apollo, the strength of the muscle is concealed by the undulation of the curves. But there is this, as a general result from the study of ancient letters, whether Greek or Roman; both are the literature of grand races, of free men and brave hearts; both abound in generous thoughts and high examples; both, whatever their occasional license, inculcate upon the whole the habitual practice of many virtues; both glow with the love of country; both are animated by the desire of fame and honor. Therefore, whatever be our future profession and pursuit, however they may take us from the scholastic closet, and forbid any frequent return to the classic studies of our youth, still he, whose early steps have been led into that land of demi-gods and heroes, will find that its very air has enriched through life the blood of his thoughts, that he quits the soil with a front which the Greek has directed towards the stars and a step which Imperial Rome has disciplined to the march that carried her eagles round the world.

VII. THE TRIUMPHS OF KNOWLEDGE.

We are looking forward to the advent of better days; and I rejoice to know that the means of securing them are in operation. Every letter taught to lisping infancy, every newspaper furnished, every school, and every institution of learning in the land, brings "the good time" nearer, and encourages us to persevere in sowing that sure and golden seed, which, once rooted in the mind, brings forth beautiful and everlasting flowers. Knowledge opens to the mind a better and more cheering world. It introduces us to objects and glories which genius alone can portray. It lifts us above the earth; it takes us around and across it, pointing out and explaining matters miraculous and stupendous. It brings back the dead—those who went down to their graves thousands of years ago, but whose spirits still light the world. It recalls deeds and re-enacts events over and over again, as truthfully as though we had been eye-witnesses. It also stretches far into the future. From the past to the present it ascends the dark staircase of time. It comprehends the possible as well as the actual, and furnishes histories long before they have taken place. Knowledge enables us to live through all time. We can tread the earth from creation's dawn up to the existing moment, and become the spectators of every change it has undergone. The overthrow of dynasties, the revolutions of empires, the

triumphs of art and literature, and the wars and conquests with which history groans, may all be crowded into our life's volume. The experience of a day becomes the experience of an age, and almost gives to man the attributes of omnipresence. From the wandering Homer, who sang as never man sang before, up to Shakspeare—the bard of all time—and down to Byron, Burns, and Moore, we can sit and hold communion with every brilliant spirit, whose corruscations dazzle the earth. Nor does the desirability of knowledge rest here. It awakens our sympathies, and by enlarging our desires, it multiplies them. It enables the possessor to command, within himself, all that is commendable and attractive to the eye of mankind. It brings him in contact with society, and adorns him in robes more costly than hand can weave, or skill invent. It is his passport, his companion, his counsellor; and, what is seldom met with in this world, it is his unfailing, unflinching, uncompromising friend. Knowledge! the ability to acquire it is the one great gift of God to man. It is the channel through which He makes himself known to us. The High and Mighty One is the source of all knowledge. Knowledge is the bulwark of our country. It is the basis of her government, the source of her glory, and the prop of her institutions. The most illustrious men of this and other ages sprung from the humbler classes of mankind, and genius does for them what wealth and station cannot do for others. Knowledge is essential to enable us to know ourselves, to understand the relative dependencies of men upon their fellow-men, to guard against cunning, intrigue and sophistry, and to teach us how to appreciate the government of that Divine Agent whose arm encircleth the Universe. It is, likewise, necessary in business; for unless the head go with the hand, wheels may move, hammers may fall, and spades wear bright in vain. Man was made for knowledge. His erect figure, his penetrating eye, and his organs of speech, all proclaim it. There are patriots who bear the brand and the sword, and patriots in name and speech; but the truest and best of patriotism is that which looks to the mental and moral, as well as the physical conditions of a country, and which desires, above all other things, the cultivation of that intellect with which God has endowed its people.—*Anonymous.*

VIII. SCIENCE AND ART.

Art is the application of science to useful purposes. Science is the head to conceive,—art the arm to execute. They are, together, in emblems, as sisters. Science is the elder, and it is her province to lead art, the younger. Science assumes that she is less liable to stumble, and claims that art should follow. Yet it must be confessed, that the great romp often gets ahead, and frequently finds shorter and more eligible routes in which her elder sister is glad to travel. Yet they love each other, and their path is the same, and their journey is ever onward. Around them the forest falls, and the rays of the sun come in upon the bosom of the earth. Cottages spring up, and flowers blossom. The neighboring woods echo to the ring of the anvil and the noise of the saw-mill, for the wild wood stream is dammed and throbs like a great artery with a flutter-wheel for a heart. Together, they have done wonders. They have timed the arrows of light, and have split the sunbeam into rainbows. They have marked out paths on the restless ocean, and measured its tides. They have stolen from the moon the secret of her motion, and betrayed the mystery of her eclipses. It is as though they had hung a pendulum to the clock-work of the universe, and registered its motions upon the dial.—*Dr. Waterbury.*

IX. LIBRARIES AND STUDY.

Beside a library, how poor are all the other greatest deeds of man—his constitution, brigade, factory, man-of-war, cathedral—how poor is everything in comparison! Look

at that wall of motley calf-skin, open those slips of inked rags—who would fancy them as valuable as the rows of stamped cloth in a warehouse? Yet Aladdin's lamp was a child's kaleidoscope in comparison. There the thoughts and deeds of the most efficient men during three thousand years are accumulated, and every one who will learn a few conventional signs—24 (magic) letters—can pass at pleasure from Plato to Napoleon, from the Argonauts to the Affghans, from the woven mathematics of La Place to the mythology of Egypt and the lyrics of Burns. Young readers! pause steadily, and look at this fact till it blaze before you; look till your imagination summon up even the few acts and thoughts named in the last sentence; and when these visions—from the Greek pirate to the shepherd Scotchman—have begun to dim, solemnly resolve to use these glorious opportunities, as one whose breast has been sobbing at the far sight of a mountain resolves to climb it, and already strains and exults in his proposed toil.—*Thomas Davis.*

X. THE POETRY OF THE STEAM ENGINE.

There is, to our own thinking, something awfully grand in the contemplation of a vast steam engine. Stand amidst its ponderous beams and bars, wheels and cylinders, and watch their unceasing play; how regular and how powerful! The machinery of a lady's Geveva watch is not more nicely adjusted—the rush of the avalanche is not more awful in its strength. Old gothic cathedrals are solemn places, presenting solemn lessons, lonely and solemn things; but to a trifler, an engine room may preach a more serious lesson still. It will tell him of mind—mind wielding matter at its will—mind triumphing over physical difficulties—man asserting his great supremacy—"intellect battling with the elements." And how exquisitely complete is every detail!—how subordinate every part towards the one great end! how every little bar and screw fit and work together! Vast as is the machine, let a bolt be but the tenth part of an inch too long or too short and the whole fabric is disorganized. It is one complete piece of harmony—an iron essay upon unity of design and execution. There is deep poetry in the steam engine—more of poetry of motion than in the bound of the antelope—more of the poetry of power than in the dash of the cataract. And ought it not to be a lesson to those who laugh at novelties, and put no faith in curiosities, to consider that this complex fabric, this triumph of art and science, was once the laughing stock of jeering thousands, and once only the working phantasy of a boy's mind as he sat, and in seeming idleness watched a little column of vapour rise from the spout of a tea kettle.—*Illuminated Magazine.*

XI. THE BIBLE THE BEST OF BOOKS.

(*From the Boston Anglo-Saxon.*)

[No. 1.]

A nation would, indeed, be truly blessed, if it were governed by no other laws than those of this blessed book; it is so complete a system that nothing can be added to it, or taken from it; it contains everything needful to be known or done; it affords a copy for a king, and a rule for a subject; it gives instruction and counsel to the senate, authority and direction for a magistrate; it cautions a witness, requires an impartial verdict of a jury, and furnishes the judge with his sentence. It sets the husband as lord of the household, and the wife as mistress of the table—tells him how to rule, and her how to manage. It entails honor to parents, and enjoins obedience to children. It prescribes and limits the sway of the sovereign, the rule of the ruler, and the authority of the master; commands the subjects to honor, and the servants to obey; and promises the blessing and protection of the Almighty, to all that walk by its rules. It gives direc-

tions for weddings, and for burials. It promises food and raiment, and limits the use of both. It points out a faithful and eternal guardian to the departing husband and father,—tells him with whom to leave his fatherless children, and in whom his widow is to trust,—and promises a father to the former, and husband to the latter. It teaches a man how to set his house in order, and how to make his will; it appoints a dowry for his wife, and entails the right of the first-born, and shows how the younger branches shall be left. It defends the right of all—and reveals vengeance to every defaulter, over-reacher, and oppressor. It is the first book,—the best book,—and the oldest book in the world. It contains the choicest matter,—gives the best instruction; affords the greatest pleasure and satisfaction ever was enjoyed. It contains the best laws, and the most profound mysteries that ever were penned; it brings the best tidings, and affords the best of comfort, to the inquiring and disconsolate. It exhibits life and immortality from everlasting, and shows the way to glory. It is a brief recital of all that is past, and a certain prediction of all that is to come. It settles all matters in debate, resolves all doubts, and eases the mind and conscience of all their scruples. It reveals the only living and true God, and shows the way to him; and sets aside all other gods, and describes the vanity of them, and of all that trust in such: in short, it is a book of laws, to show right and wrong; a book of wisdom, that condemns all folly, and makes the foolish wise; a book of truth, that detects all lies and confutes all errors; and a book of life, that shows the way from everlasting death. It is the most compendious book in the world—the most authentic, and the most entertaining history that ever was published. It contains the most ancient antiquities, strange events, wonderful occurrences, heroic deeds, unparallelled wars; it describes the celestial, terrestrial, and internal worlds, and the origin of the angelic myriads, human tribes, and devilish legions. It will instruct the accomplished mechanic, and the most profound artist. It teaches the best rhetorician, and exercises every power of the most skillful arithmetician; puzzles the wisest anatomist, and exercises the nicest critic. It corrects the vain philosopher, and confutes the unwise astronomer. It exposes the subtle sophist, and makes diviners mad. It is a complete code of laws—a perfect body of divinity—an unequalled narrative—a book of lives—a book of travels, and a book of voyages. It is the best covenant that ever was agreed on—the best deed that ever was sealed—the best evidence that ever was produced—the best will that ever was made. To understand it, is to be wise indeed; to be ignorant of it, is to be destitute of wisdom. It is the king's best copy, the magistrate's best rule, the housewife's best guide, the servant's best directory, and the young man's best companion; it is the schoolboy's best book, and the learned man's master-piece. It contains a choice grammar for a novice, and a profound mystery for a sage. It is the ignorant man's dictionary, and the wise man's directory. It affords knowledge of witty inventions for the humorous, and dark sayings for the grave; and it is its own interpreter. It encourages the wise, the warrior, the swift, and the overcomer; and promises an eternal reward to the excellent, the conquerer, the winner, and the prevalent. And that which crowns all, is, that the Author is without partiality, and without hypocrisy. "*In whom is no variableness or shadow of turning.*"

[No. 2.]

(*From a Speech at London*, 1848, *by the Rev. George Gilfillan.*)

The Bible is not a scientific work; it does not profess or display any scientific methods; but it could not be remarked with too much attention, that no passage contained therein, as properly interpreted, was found to contradict any principle of scientific truth. It had been subjected to the fire of the closest investigation, a fire which had contemp-

tuously burnt up the cosmography of the Shastre, the absurdities of the Koran, and other works of false philosophy, but yet this artless, loosely compiled little book was unhurt, untouched, not one of its pages singed, with not even the smell of fire upon it. That book was the mirror of Divinity; other books, like the planets, shone with reflected lustre,—that book, like the sun, shone with unborrowed rays; other books sprang from earth, that book of books came from heaven on high; other books appealed to the understanding or feelings, that book to conscience and faith: other books solicited their attention, that book demanded it, for it "spoke with authority and not as the scribes." Other books would glide gracefully along the earth, or onwards to the mountain summit of imagination; that book, and that alone, conducted up the awful abyss which led to heaven: other books, after shining a little season, might perish in flames fiercer than those which consumed the Alexandrian library; that book should remain, pure as gold, yet unconsumable as asbestos, in the flames of a general conflagration. Other books might be forgotten in an universe where suns go down and disappear like bubbles in the stream; that book transferred to a higher place, shall shine as the brightness of the firmament and as the stars of heaven.

"Within that awful volume lies,
The mystery of mysteries.
Happy the man of human race,
To whom our God has granted grace,
To ask, to seek, to hope, to pray,
To lift the latch, and find the way.
But better had he not been born,
Who reads to doubt, or reads to scorn."

[No. 3.]

(*Extract from the Obligations of the World to the Bible, by the Rev. Dr. Spring, of New York.*)

There is no book in any country, in any language, in any age, that can be compared with this. From one page of this wonderful volume, more may be acquired, than reason or philosophy could acquire by patience and the toil of centuries. The Bible expands the mind, exalts the faculties, developes the powers of the will and of feeling, furnishes a more just estimate of the true dignity of man, and opens more sources of intellectual and spiritual enjoyment, than any other book. Science and literature have taken deep root on this consecrated soil. No book furnishes so many important hints to the human mind; gives so many clues to intellectual discovery, and has so many charms in so many departments of human inquiry. In whatever paths of science, or walks of human knowledge we tread, there is scarcely a science or pursuit of paramount advantage to mankind, which may either trace its origin to the Bible, or to which the Bible will not be found to be a powerful auxiliary. Whether we consider its influence upon an oral and written language—upon history and literature—upon laws and government—upon civil and religious liberty—upon the social institutions—upon moral science and the moral virtues—upon the holiness which fits men for heaven, and the peculiar spirit and exalted character which prepares them to act well their part on earth—upon the happiness they enjoy in the present world—or upon the agency and power by which these desirable results are secured; we shall be at no loss to see that the world in which we live is under everlasting obligations to a supernatural revelation.

Wordsworth, in one of his beautiful sonnets on the translation of the Scripture, says:

"But, to outweigh all harm, the sacred Book,
In dusty sequestration wrapt too long,

Assumes the accents of our native tongue ;
And he who guides the plough or wields the crook,
With understanding spirit now may look
Upon her records, listen to her song,
And sift her laws—much wondering that the wrong
Which faith has suffered, heaven could calmly brook.
Transcendant boon !—noblest that earthly king
Ever bestowed to equalize and bless,
Under the weight of mortal wretchedness."

XII. MILTON AND HIS POETRY.

His principal characteristic is majesty. In Milton's character and work is consummated the union of human learning and divine love. Here, as in an old world cathedral, illumined by the setting sun, and resounding hallelujahs, blends the most perfect devotion with the most perfect art. All is grand, and beautiful, and holy. In the "Paradise Lost," you come into contact with thoughts which sweep the whole compass of letters, and the fresh fields of nature made lustrous by the fine frenzy of the poet ; here also, and more especially, you come into contact with "thoughts which wander through eternity." You trace his daring flight, not simply through the realms of primeval glory, but of chaos and elder night. You follow the track of his burning wing through the hollow abyss, "whose soil is fiery marl," whose roof is one vast floor of lurid light, and whose oceans are "floods of sweltering flame." You mingle, shuddering with infernal hosts, or listen with rapture to the far-off choiring of cherubim and seraphim, the glorious mingling of sweet sounds "from harp, lute, and dulcimer." You stand on the dismal verge of Pandemonium, with its dusky swarms of fallen spirits, glimmering through the shadows, "thick as the leaves in Vallambrosa," see borne upon its burning marl or sailing through the gloomy atmosphere, that form of angel ruined, vast, shadowy, and terrible, which when it moves causes the abyss to shudder. You gaze with astonishment and awe upon the starry domes, which rise, "like an exhalation," from the fiery depths, and tremble at the shout of defiance from the the multitudinous army, as it rings through those lurid halls. Or, rising oppressed with the splendour and woe of the infernal regions, you pass, with the gentle poet, into the fragrance of Paradise, bathe your eyes in celestial dews, wander with heavenly guests through the melodious groves and "amaranthine bowers" of Eden, quaffing immortal draughts from cool fountains, soothed by the song of early birds, and finding rest unutterable beneath the shadow of the tree of life ; or, it may be, holding converse high, on some "serener mount," with angelic forms, or with that noblest pair, whose innocence and beauty are fresh as the young dews which glisten upon the flowers of Eden. You catch the spirit of that high Christian seer, gaze through the long vista of time, behold the wonders of Calvary, man redeemed, and the gates of glory thronged with rejoicing myriads.—*Rev. R. Turnbull in Christian Review.*

XIII. THE UNION OF RELIGION, SCIENCE AND LITERATURE, IN THE CHARACTER OF EMINENT LAYMEN.

(*From a Speech in London, in* 1848, *by the Rev. George Gilfillan.*)

I need not now allude to the many eminent divines who have excelled in works of science and literature, though they have been numerous, because their testimony might be considered interested and worthless, however high their authority might otherwise be.

I do not say it ought to be considered in such a light, but it is far safer to adduce instances of another kind to which no such objection could be made. When illustrious laymen came forth from their laboratories, observatories, or painting rooms, or desks, and delivered distinct, deliberate, and eloquent witness in behalf of Christian truth, it was as if the prophet were again helping the woman. The thunder of a Bossuet, a Hall, or a Chalmers, coming from the pulpit, did not speak so loud in the cause of Christianity, as the still small voice which proceeded from the studies of such men as Boyle, Addison, Cowper, or Isaac Taylor. They could, indeed, speak of mighty names on their side. Galileo, the starry sage, who first unravelled the map of the sky, was a Christian. Michael Angelo, the best painter who ever stamped his strong soul on canvas—the greatest sculptor who ever wrought his terrible conceptions into marble,—the greatest architect who ever suspended the truth of genius between earth and heaven. Michael Angelo was a Christian, and some of his sonnets written in his old age breathed the purest spirit of Christian faith and Christian love. And need he speak of John Milton, who laid the brightest crown of genius at the foot of the cross, and sprinkled the waters of Castalia on the roses of the garden of God. It might be asked, why he brought forward those names? Was it that he held them to be the pillars of Christianity? No,—Christianity stood on her own foundations, on her own simplicity, beauty, purity, grandeur, originality, and adaptation to the wants and circumstances of men. Those men were not the pillars, they were merely the decorations of her temple.

XIV. THE MEMORIES OF GREAT MEN.

What a wonderful and beautiful thing is the gift of genius! How it enshrines its possessors in the minds and memories of men! How it creates a home for itself in hearts which have long felt, but could not express, its breathing thoughts and burning words! How its interests and sympathies go on circling and widening, like the ripples around the stone cast into the water, till they become as "household words" or "old familiar faces," in all tongues and all lands! How it grows—never older, but ever younger; the mighty men of yore speaking more powerfully to the generation of to-day, than to the past of yesterday! Beauty has power, and it, also, is a gift from Heaven; but it passeth away, and its place is known no more; for who treasures the defaced and vacant casket, or the flower of the morning, when it lies on the cold ground? The easel of the painter and the chisel of the sculptor, may preserve the lineaments of loveliness, but only as a sight to the eyes, no longer as a voice to the heart. Riches, too, have power, but they have also wings, and oftentimes they flee away. And even when they remain till the rich man is obliged to flee from them, they leave no memories, they create no sympathies. Rank is mighty over the minds of men, and proudly does it rear its ermined form and jewelled brow; but the time soon comes when no voice sounds. No power emanates from the crimson pall and escutcheoned tomb. How different is genius from all these! True, it has its waywardness, its follies, its eccentricities; but these are lost in, or perhaps only enhanced by, the charm of its truth, its earnestness, its humility. Yes, genius is true; it is a reality; it has truth to inculcate, and work to do, were it only to bring down a sense of beauty, or a power of vision to closed hearts and filmy eyes. Genius is earnest; it flutters not like the white-winged wanderers of the summer, idly and uselessly, from flower to flower; but, like the bee, it perceives, and earnestly extracts, use with the beauty, food with the perfume. Genius is humble: striving after something far higher than itself, which it never reaches, gazing into brightness and into beauty which it cannot emulate, it for ever sees its own littleness, its own darkness, its own deformity, and shrinks from occupying the pedestal assigned to it by its day and generation. Of course, these

qualities form the golden setting of the real gem, fresh from the depths of the ocean, or the recesses of the mine, for never do they surround the mock jewel, created out of the dust and tinsel of the world. It is not, however, to the fulfilled thoughts, and words, and works of great men—it is not to their name and their fame throughout the land—it is not to the incense showered upon them in the halls of the crowned, and the circles of the beautiful—that our hearts turn with the deepest understanding and sympathy. No, it is to their homes and their hearths, to their joys and their sorrows. Yonder are the walls which have looked down upon the midnight vigil and noonday languor. Yonder is the window whence the eye, gazing up to the heavens, has caught something of their inspiration. Lo, here the board which has echoed to the sweet sounds of household jest and homely tenderness. Lo, there the sleepless couch, where the sufferings of life, if not more bravely borne, have been more deeply felt, than by other men!—*Anonymous.*

XV. THE MEMORY OF THE DEAD.

(From Salad for the Solitary,)

How beautiful is the memory of the dead! What a holy thing it is in the human heart, and what a charming influence it sheds upon human life! How it subdues all the harshness that grows up within us in the daily intercourse with the world! How it melts our unkindness, softens our pride, kindles our deepest love, and tasks our highest aspirations! Is there one who has not some loved friend gone into the eternal world, and one whom he delights to live again in memory? Does he not love to sit down in the hushed and tranquil home of existence, and call around him the face, the form, so familiar, and cherished—to look into the eye that mirrored, not more clearly his own face, than the soul which he loves—to listen to the tones which he loved to listen to, the tones which were once melody in his ear, and have echoed softly in his ear since they were hushed to his senses? Is there a spirit to which heaven is not brought nearer, by holding some kindred souls? How friend follows friend into the happy dwelling place of the dead, till we find at length, that those who loved us on the heavenly shore are more than they who dwell among us! Every year witnesses the departure of some one whom we knew and loved; and when we recall the names of all who have been dear to us in life, how many of them we see passed into that city which is imperishable. The blessed dead! how free from sin is our love for them! The earthly taint of our affections is buried with that which was corruptible, and the divine in its purity illumines our breast. We have now no fear of losing them. They are fixed for us eternally in the mansions prepared for our re-union. We shall find them waiting for us, in their garments of beauty. The glorious dead! how reverentially we speak their names. Our hearts are sanctified by their words which we remember. How wise they have now grown in the limitless fields of truth! How joyous they have now become by the undying fountain of pleasure! The immortal dead! how unchanging is their love for us! How tenderly they look down on us, and how closely they surround our beings, how earnestly they rebuke the evils of our lives. Let me talk pleasantly of the dead, as those who no longer suffer and are tried, as those who pursue no longer the fleeting, but have grasped and secured the real. With them the fear and the longings, the hope and the terror, and the pain are past; the fruition of life has begun. How unkind, that when we put away their bodies, we should cease the utterance of their names. The tender-hearted dead, who struggle so in parting from us! why should we speak of them in awe, and remember them only with sighing? Very dear were they when hand clasped hand, and heart responded to heart. Why are they less dear when they have grown worthy of a higher love than ours, and their perfected souls might receive even our adoration! By their hearthside and graveside, in solitude and amid the multitude, think cheerfully and speak lovingly of the dead.

XVI. THE SAINTED DEAD.

They are our treasures—changeless and shining treasures. Let us look hopefully. Not lost, but gone before. Lost only like stars of the morning, that have faded into the light of a brighter heaven. Lost to earth, but not to us. When the earth is dark, then the heavens are bright; when objects around become indistinct and invisible in the shades of night, then objects above us are more clearly seen. So is the night of sorrow and mourning; it settles down upon us like a lonely twilight at the grave of our friends, but then already they shine on high. While we weep, they sing. While they are with us upon earth, they lie upon our hearts refreshingly, like the dew upon the flowers; when they disappear, it is by a power from above that has drawn them upward; and, though lost on earth, they still float in the skies. Like the dew that is absorbed from the flowers, they will not return to us; but, like the flowers themselves, we will die, yet only to bloom again in the Eden above. Then those whom the heavens have absorbed and removed from us, by the sweet attraction of their love, made holier and lovelier in light, will draw towards us again by holy affinity, and rest on our hearts as before. They are our treasure—loving ones—the sainted dead!—*Harbaugh's Heavenly Recognition.*

XVII. THE SEA, THE LARGEST OF ALL CEMETERIES.

The Sea is the largest of all Cemeteries, and its slumberers sleep without a monument. All other graveyards, in all other lands, show some symbol of distinction between the great and the small, the rich and the poor; but in that ocean cemetery the king and the clown, the prince and the peasant, are alike undistinguished. The same wave rolls over all—the same requiem by the minstrelsy of the ocean is sung to their honour. Over their remains the same storm beats, and the same sun shines; and there, unmarked, the weak and the powerful, the plumed and the unhonoured, will sleep on until awakened by the same trump when the sea will give up its dead.—*Anonymous.*

XVIII. THE FALL OF THE LEAF.

Autumn tinges the forest, and the deepening green fades into brown. The slanting sun sinks sooner to its bed; the rains are steadier and less hopeful of a break; and the day, like that of aging man is graver. The wind is harsher—it beats and tears the trees in their waning life, and already begins to strip them of their summer glories, strewing the ground with the cast off rags of verdure. The dahlia holds out the parting splendours of the summer, with an intense fire of its own, as though sunlight had been sown and blossomed in colour. The corn has been robbed of its golden crown. The gay season has passed, and autumn is leading us to winter, as life wanes and the sombred countenance of man foreshadows death.

Death the handmaid of life. The leaf falls to compose the life-giving earth for future forests—the tree perishes to heap nurture round the root of the sapling; the glowing petal rots and is food for the seed of the bud; the corn is gathered to feed the race that survives many generations of corn and seeds beyond its own mortality. Man witnesses these transitions with saddened senses by an informed faith, spans the dark chasm between summer and summer, and borrows for the drear season the light of future years. Other creatures die; he is gifted with the sad knowledge that he dies, but he is able to recognize death as the frontier between life and life. Where the lichen crept over the barren rock, the shrub has grown to forests, the corn waves, and the voice of man breaks the silence of the desert to sing the story of the world; that long story which began before mankind awoke in its cradle, the tale in which ages are as seasons, and change is ever-increasing glory.

To the informed soul of man the fall of the leaf speaks not only of a resurrection, but teaches him how decay is but a process of regeneration; destruction is the first half of improvement. When living nature has attained perfection in one type, it will not tolerate less, but each stage is made complete, and then the creature perfected after its kind, gives place to new perfection. As forests fall that more stately forests may rise, so human states fall that greater states may rise. Persia and Egypt sank into the tomb on which Greece built her temple; Rome propagated the civilization planted by Greece, and modern Europe rises on the ruins of Rome. Revolutions are but the fall of the leaf. Poland has rotted in the soil of Europe; but the Emperor sitting at Warsaw can no more forbid the unborn nation, than the vulture perched upon the fallen oak trunk can forbid the oak which is growing beneath his feet.

XIX. BEAUTIFUL AUTUMN.

The sere and yellow leaf reminds us that another autumn is at hand. There is no subject in nature more beautiful to the contemplative mind than Autumn. When we go back in memory to the gay flowers of the vernal fields, the green foliage of the mountains, hills and valleys, and contemplate their beauty, their glory, their freshness, their grandeur and sublimity, we think of but youth and happiness. But when we see the ruddy hue of declining Summer deepening into the rich robe of Autumn—gathering like the pall of death upon all nature—we are reminded in her own emphatic language, that we, like the "leaves that fall in wintry weather," must ere long, as they are nipped by the autumnal frost, be cut down by the strong arm of death, and gathered to the tomb of silence. It is the time for the mother to visit the lonely grave of her departed love, and weep over it the bright tear of sorrow—for the friend, the acquaintance, and the relative—to think of those who have closed their eyes forever upon the vanities of earth, and lie sleeping among the silent dead. At such a period the mind enters into untold enjoyment. There is a sweetness even in the deepest melancholy, which flows to the heart, touching every tendril with emotions of affection, sympathy and love. It is the time to abstract our thoughts from things perishable—to turn from the ephemeral charms of earth, the more sublime beauties which lie beyond the grave—to learn from the sober realities around us, that our days will have an autumn, that we cannot expect while here "our bright summer always," though we may look forward to a time when the bloom of an eternal Spring will be known forever; where streams of happiness flow in tranquil beauty from a fountain which time cannot affect.— *Washington Irving.*

SELECTIONS FOR SCHOOL RECITATIONS.

Part III.—Poetry.

I. THE ALMA RIVER.

(*By the Very Rev. Richard Chenevix Trench, D.D.*)

Though till now ungraced in story, scant although thy waters be,
Alma, roll those waters proudly, roll them proudly to the sea!
Yesterday unnamed, unhonoured, but to wandering Tartar known,
Now thou art a voice forever, to the world's four corners blown.
In two nations' annals written, thou art now a deathless name,
And a star forever shining in their firmament of fame.

Many a great and ancient river, crowned with city, tower, and shrine,
Little streamlet, knows no magic, has no potency like thine;
Cannot shed the light thou sheddest around many a living head,
Cannot lend the light thou lendest to the memories of the dead;
Yea, nor, all unsoothed their sorrow, who can, proudly mourning, say,—
When the first strong burst of anguish shall have wept itself away,—
"He hath pass'd from us, the loved one; but he sleeps with them that died
"By the Alma, at the winning of that terrible hill-side."

Yes, and in the days far onward, when we all are cold as those
Who beneath thy vines and willows on their hero-beds repose,
Thou, on England's banners blazoned with the famous fields of old,
Shalt, where other fields are winning, wave above the brave and bold;
And our sons unborn shall nerve them for some great deed to be done
By that twentieth of September, when Alma's heights were won.
Oh! thou river, dear forever to the gallant, to the free,
Alma, roll thy waters proudly, roll them proudly to the sea!

—

IN ALMAM FLUVIUM

VICTORIA CRUENTIA A. D. XII. CAL. OCTOB. A. S. MDCCCLIV. NOBILITATUM.

Mater es, Alma, necis; partæ sed sanguine nostro,
Pacis tu nutrix, Almaque Mater eris.

II. THE EAST INDIAN MASSACRES.

The fearful scenes now being enacted in the East Indies by the cowardly and mutinous Sepoys forcibly recal the tragic events connected with the conquest of the Punjaub. The following touching and beautiful poem by the Very Rev. Richard Chenevix Trench, D.D., on the murder at Mooltan of two British officers, Anderson and Agnew, is singularly and painfully appropriate at the present time.

The gallant Major Edwardes' narrative of the tragedy states that, "having been reduced to extremity, Sirdar Khan Sing begged Mr. Agnew to be allowed to wave a sheet and sue for mercy. Though weak from loss of blood, Agnew's heart failed him not. He replied: 'The time for mercy is gone; let none be asked for; we are not the last of the English—thousands of them will yet come down here when we are gone, and annihilate Moolraj, his soldiers, and his fort!' The crowd rushed in, seized Khan Sing and surrounded the two officers who were talking together in English, doubtless bidding each other farewell for all time. They were soon despatched, and their dead bodies thrown out and insulted by the crowd. . . . . The English indeed soon came and reduced the fortress; but they did not depart without performing the last sad rites over the gallant slain. The bodies of the two officers were carefully, even affectionately, removed and wrapped in cashmere shawls, to obliterate all traces of neglect. They were borne by the soldiers in triumph through the breach in the walls, and placed in an honoured resting place on the summit of Moolraj's citadel!"—Ed.

Bear them gently, bear them duly, up the broad and sloping breach
Of this torn and shattered city, till their resting-place they reach.
In the costly cashmeres folded, on the stronghold's topmost crown,
In the place of foremost honor, lay these noble relics down.
Here repose, for this is meetest, ye who here breathed out your life,
Ah! in no triumphant battle, but beneath the assassin's knife.

Hither, bearing England's message, bringing England's just demand,
Under England's ægis, came ye to the chieftain of the land:
In these streets beset and wounded, hardly borne with life away,
Faint, and bleeding, and forsaken, in your helplessness ye lay.

But the wolves that once have tasted blood, will raven still for more;
From the infuriate city rises high the wild and savage roar.
Near and nearer grows the tumult of the gathering murderous crew,
Tremble round those helpless couches, an unarmed but faithful few:
"Profitless is all resistance, let us then this white flag wave,
Ere it be too late, disdain not mercy at their hands to crave."

But to no unworthy pleading, would descend that noble twain:
"Nay, for mercy sue not; ask not what to ask from these were vain.
We are two, betrayed and lonely; human help or hope is none;
Yet, O friends, be sure that England owns beside us many a son.
"They may slay us; in our places multitudes will here be found,
Strong to hurl this guilty city, with its murderers to the ground.
Yea, who stone by stone would tear it from its deep foundations strong,
Rather than to leave unpunished, them that wrought this treacherous wrong."

Other words they changed between them, which none else could understand,
Accents of our native English, brothers grasping hand in hand.
So they died, the gallant hearted! so from earth their spirits past,
Uttering words of lofty comfort, each to each, unto the last;
And we heard, but little heeded their true spirits far away,
All of wrong and coward outrage, heaped on the unfeeling clay.

Lo! a few short moons have vanished, and the promised ones appear,
England's pledged and promised thousands, England's multitudes are here.
Flame around the blood-stained ramparts swiftest messengers of death,
Girdling with a fiery girdle, blasting with a fiery breath;
Ceasing not, till choked with corpses low is laid the murderers' hold,
And in his last lair the tiger toils of righteous wrath enfold.
Well, oh well—ye have not fail'd them who on England's truth relied,
Who on England's name and honor did in that dread hour confide:

Now one last dear duty render to the faithful and the brave,
What they left of earth behind them rescuing for a worthier grave.
Oh then, bear them, hosts of England, up the broad and sloping breach
Of this torn and shattered city till their resting place they reach.
In the costly cashmeres folded, on the ramparts' topmost crown,
In the place of foremost honor, lay these noble relics down!

III. THE ISLESMEN OF THE WEST.

[*From the Dublin University Magazine.*]

There is mustering on the Danube's banks such as Earth ne'er saw before,
Though she may rifle where she may her glory-page of yore:
The bravest of her children, proud Europe stands to-day,
All battle-harnessed for the strife, and panting for the fray.
No jewelled robe is round her flung, no glove is on her hand,
But visor down and clasped in steel, her gauntlet grasps the brand;
Oh! lordly is the greeting as she rises from her rest,
And summons to the front of fight the Islesmen of the West.

No braver on this earth of ours, no matter where you go,
Then they whose boast was aye to bear the battle's sternest blow;
No braver than that gallant host, who wait with hearts of fire
To bridle with an iron bit the Muscovite's desire.
Ho! gallant hearts, remember well the glories of the past,
And answer with your island shout the Russian's trumpet-blast;
Ho! gallant hearts, together stand, and who shall dare molest,
The bristling hem of battle's robe, the Islesmen of the West?

Brave are the chivalry of France as ever reined a steed,
Or wrung from out the jaws of death some bold heroic deed;
A hundred fields have proved it well from Neva to the Po.
When kings have knelt to kiss the hand that smote their souls with wo.
And worthy are the sons to-day of that old Titan breed,
Who spoke in thunders to the Earth that glory was their creed;
Ay, worthy are the sons of France, in valour's lap caress'd,
To-night beside their foes of old, the Islesmen of the West.

Oh, England! in your proudest time you ne'er saw such a sight,
As when you flung your gauntlet down to battle for the right;
What are the Scindian plains to us, the wild Caffrarian kloof,
That glory may be bought too dear that brings a world's reproof?
The brightest deed of glory is to help the poor and weak,
And shield from the oppressor's grasp the lowly and the meek;
And that thou'lt do—for never yet you raised your lion crest,
But victory has blest your sons, the Islesmen of the West.

Who are those haughty Islesmen now who hold the keys of earth,
And plant beside the Crescent moon the banner of their birth?
Who are those scarlet ranks that pass the Frenchman and the Turk,
With lightsome step and gladsome hearts, like reapers to their work?
The sons of Merry England they, reared in her fertile lands,
From Michael's Mount to stout Carlisle, from Thames to Mersey's sands;
From every corner of the isle where valour was the guest,
That cradled in the freeman's shield the Islesmen of the West.

The stormers of the breach pass on, the daring sons of Eire,
Light-hearted in the bayonet-strife as in the country fair;
The mountaineer who woke the lark on Tipperary's hills,
And he who kiss'd his sweetheart last by Shannon's silver rills.
The "Rangers" of our western land who own that battle-shout,
That brings the "Fag-an-bealag" blow, and seals the carnage rout;
Those septs of our old Celtic land, who stand with death abreast,
And prove how glorious is the fame of Islesmen of the West.

The tartan plaid and waving plume, the bare and brawny knee,
Whose proudest bend is when it kneels to front an enemy;
The pulse of battle beating fast in every pibroch swell—
Oh, God assoilize them who hear their highland battle yell.
Those Campbell and those Gordon men, who fight for "auld lang syne,"
And bring old Scotland's broadsword through the proudest battle line;
You have done it oft before, old hearts, when fronted by the best,
And where's the serf to-day dare stand those Islesmen of the West?

Speak! from your bristling sides, ye ships, as Nelson spoke before—
Speak! whilst the world is waiting for your thunder-burst of yore;
Speak! whilst your Islesmen stand before each hot and smoking gun,
That rends the granite from the front of forts that must be won.
Unroll that grand old ocean flag above the smoke of fight,
And let each broadside thunder well the Islesmen's battle might;
Roll out, ye drums, one glory peal, 'tis Liberty's behest,
That summons to the front of fight the Islesmen of the West!

IV. THE SPANISH ARMADA.

BY LORD MACAULAY.

Attend, all ye who list to hear our noble England's praise,
I sing of the thrice famous deeds, she wrought in ancient days,
When that great fleet invincible, against her bore, in vain,
The richest spoils of Mexico, the stoutest hearts in Spain.
It was about the lovely close of a warm summer's day,
There came a gallant merchant ship, full sail to Plymouth bay;
The crew had seen Castile's black fleet, beyond Aurigny's isle,
At earliest twilight, on the waves, lie heaving many a mile.
At sunrise she escaped their van, by God's especial grace;
And the tall Pinta, till the noon, had held her close in chase.
Forthwith a guard, at every gun, was placed along the wall;
The beacon blazed upon the roof of Edgecombe's lofty hall;
Many a light fishing bark put out, to pry along the coast;
And with loose rein, and bloody spur, rode inland many a post.

With his white hair, unbonnetted, the stout old sheriff comes;
Behind him march the halberdiers, before him sound the drums.
The yeomen, round the market cross, make clear an ample space,
For there behoves him to set up the standard of her grace:
And haughtily the trumpets peal, and gaily dance the bells,
As slow, upon the laboring wind, the royal blazon swells.
Look how the lion of the sea lifts up his ancient crown,
And underneath his deadly paw treads the gay lilies down!
So stalked he when he turned to flight, on that famed Picard field,
Bohemia's plume, and Genoa's bow, and Cæsar's eagle shield:
So glared he when, at Agincourt, in wrath he turned to bay,
And crushed and torn, beneath his claws, the princely hunters lay,
Ho! strike the flagstaff deep, sir knight! ho! scatter flowers, fair maids!
Ho, gunners! fire a loud salute! ho, gallants! draw your blades!
Thou sun, shine on her joyously! ye breezes, waft her wide!
Our glorious *semper eadem!* the banner of our pride!

The fresh'ning breeze of eve unfurled that banner's massy fold—
The parting gleam of sunshine kissed that haughty scroll of gold.
Night sunk upon the dusky beach, and on the purple sea;
Such night in England ne'er had been, nor e'er again shall be.
From Eddystone to Berwick bounds, from Lynn to Milford bay,
That time of slumber was as bright, as busy as the day;
For swift to east, and swift to west, the warning radiance spread—
High on St. Michael's Mount it shone—it shone on Beachy Head.

Far o'er the deep the Spaniard saw, along each southern shire,
Cape beyond cape, in endless range, those twinkling points of fire,
The fisher left his skiff to rock on Tamer's glittering waves,
The rugged miners poured to war, from Mendip's sunless caves:
O'er Longleat's towers, o'er Cranbourne's oaks, the fiery herald flew—
He roused the shepherds of Stonehenge—the rangers of Beaulieu.
Right sharp and quick the bells rang out, all night, from Bristol town
And, ere the day, three hundred horse had met on Clifton Down.
The sentinel on Whitehall gate looked forth into the night,
And saw, o'erhanging Richmond Hill, that streak of blood-red light.
The bugle's note, and cannon's roar, the deathlike silence broke,
And with one start, and with one cry, the royal city woke;
At once, on all her stately gates, arose the answering fires;
At once the wild alarum clashed from all her reeling spires;
From all the batteries of the Tower pealed loud the voice of fear,
And all the thousand masts of Thames sent back a louder cheer.
And from the farthest wards was heard the rush of hurrying feet,
And the broad streams of flags and pikes dashed down each rousing street:
And broader still became the blaze, and louder still the din,
As fast from every village round the horse came spurring in;
And eastward straight, for wild Blackheath, the warlike errand went;
And roused in many an ancient hall, the gallant squires of Kent:
Southward, for Surrey's pleasant hills, flew those bright coursers forth;
High on black Hampstead's swarthy moor, they started for the north;
And on, and on, without a pause, untired they bounded still;
All night from tower to tower they sprang, all night from hill to hill;
Till the proud peak unfurled the flag o'er Derwent's rocky dales;
Till, like volcanoes, flared to heaven the stormy hills of Wales;
Till twelve fair counties saw the blaze on Malvern's lonely height;
Till streamed in crimson, on the wind, the Wrekin's crest of light.
Till broad and fierce the star came forth, on Ely's stately fane,
And town and hamlet rose in arms, o'er all the boundless plain:
Till Belvoir's lordly towers the sign to Lincoln sent,
And Lincoln sped the message on, o'er the wide vale of Trent;
Till Skiddaw saw the fire that burnt on Gaunt's embattled pile,
And the red glare on Skiddaw roused the burghers of Carlisle.

V. THE DESTRUCTION OF SENNACHERIB'S HOST AT JERUSALEM.

BY LORD BYRON.

"The Lord sent an angel, which cut off all the mighty men of valour, and the leaders and captains in the camp of the king of Assyria: so he returned with shame of face to his own land."—2 Chronicle xxxii. 21.

The Assyrian came down like a wolf on the fold,
And his cohorts were gleaming in purple and gold;
And the sheen of their spears was like stars on the sea,
When the blue wave rolls nightly on deep Galilee.

Like the leaves of the forest, when summer is green,
That host, with their banners, at sunset were seen:
Like the leaves of the forest, when autumn hath blown,
That host, on the morrow, lay withered and strewn.

For, the angel of death spread his wings on the blast,
And breathed on the face of the foe as he passed:
And the eyes of the sleepers waxed deadly and chill,
And their hearts but once heaved, and for ever grew still!

And there lay the steed, with his nostril all wide,
But through it there rolled not the breath of his pride:
And the foam of his gasping lay white on the turf,
And cold as the spray of the rock-beating surf.

And there lay the rider distorted and pale,
With the dew on his brow, and the rust on his mail;
The tents were all silent, the banners alone,
The lances unlifted, the trumpet unblown.

And the widows of Ashur are loud in their wail,
And the idols are broke in the temple of Baal;
And the might of the Gentile, unsmote by the sword,
Hath melted like snow in the glance of the Lord!

VI. FALLEN IS THY THRONE, O ISRAEL!

BY THOMAS MOORE.

Fall'n is thy throne, O Israel!
Silence is o'er thy plains;
Thy dwellings all lie desolate,
Thy children weep in chains.
Where are the dews that fed thee
On Etham's barren shore?
That fire from heaven which led thee
Now lights thy path no more.

Lord! thou didst love Jerusalem—
Once she was all thine own:
Her love thy fairest heritage,
Her power thy glory's throne.
Till evil came, and blighted
Thy long-loved olive tree;
And Salem's shrines were lighted
For other gods than thee.

Then sank the star of Solyma,
Then pass'd her glory's day,
Like heath that, in the wilderness,
The wild wind whirls away.
Silent and waste her bowers,
Where once the mighty trod,
And sunk those guilty towers,
Where Baal reign'd as God.

"Go" said the Lord, "Ye Conquerors!
Steep in her blood your swords,
And raze to earth her battlements,
For they are not the Lord's.
Till Zion's mournful daughter
O'er kindred bones shall tread,
And Hinnom's vale of slaughter
Shall hide but half her dead."

But soon shall other pictur'd scenes
In brighter vision rise,
When Zion's sun shall sevenfold shine
On all her mourners' eyes:
And on her mountains beauteous stand
The messengers of peace;
"Salvation by the Lord's right hand,"
They shout and never cease.

VII. JACOB'S DREAM.

BY THE REV. GEORGE CROLY, LL.D.

The sun was sinking on the mountain zone
That guards thy vales of beauty, Palestine!
And lovely from the desert rose the moon,
Yet lingering on the horizon's purple line,

Like a pure spirit o'er its earthly shrine.
Up Padan-aram's height abrupt and bare
A pilgrim toil'd, and oft on day's decline
Look'd pale, then paused for eve's delicious air,
The summit gain'd, he knelt, and breathed his evening prayer.

He spread his cloak and slumber'd—darkness fell
Upon the twilight hills; a sudden sound
Of silver trumpets o er him seem'd to swell;
Clouds heavy with the tempest gather'd round;
Yet was the whirlwind in its caverns bound;
Still deeper roll'd the darkness from on high,
Gigantic volume upon volume wound,
Above, a pillar shooting to the sky,
Below, a mighty sea, that spread incessantly.

Voices are heard—a choir of golden strings,
Low winds, whose breath is loaded with the rose;
Then chariot-wheels—the nearer rush of wings;
Pale lightning round the dark pavilion glows.
It thunders—the resplendent gates unclose;
Far as the eye can glance, on height o'er height,
Rise fiery waving wings, and star-crown'd brows,
Millions on millions brighter and more bright,
Till all is lost in one Supreme, unmingled light.

But, two beside the sleeping pilgrim stand,
Like cherub-kings, with lifted, mighty plume,
Fix'd, sun-bright eyes, and looks of high command:
They tell the patriarch of his glorious doom;
Father of countless myriads that shall come,
Sweeping the land like billows of the sea,
Bright as the stars of heaven from twilight's gloom,
Till he is given whom angels long to see,
And Israel's splendid line is crown'd with Deity.

VIII. THE CHRISTIAN MARINER'S HYMN.

BY CAROLINE SOUTHEY.

Launch thy bark, mariner! Christian, God Speed thee!
Let loose the rudder-bands!—good angels lead thee!
Set thy sails warily; tempests will come;
Steer thy course steadily! Christian, steer home!

Look to the weather-bow, breakers are round thee!
Let fall the plummet now—shallows may ground thee.
Reef in the fore-sail there? hold the helm fast!
So—let the vessel veer! there swept the blast.

What of the night, watchman? What of the night?
"Cloudy—all quiet—no land yet—all's right."
Be wakeful, be vigilant!—danger may be
At an hour when all seemeth securest to thee.

How! gains the leak so fast? Clean out the hold—
Hoist up thy merchandise—heave out thy gold;
There—let the ingots go!—now the ship rights;
Hurrah! the harbour's near—lo, the red lights!

Slacken not sail yet at inlet or island;
Straight for the beacon steer—straight for the high land;
Crowd all thy canvas on, cut through the foam—
Christian! cast anchor now—HEAVEN IS THY HOME!

IX. WOLSEY'S FALLEN GREATNESS.

BY WILLIAM SHAKSPEARE.

Cromwell*, I did not think to shed a tear
In all my miseries; but thou hast forc'd me
Out of thy honest truth to play the woman.
Let's dry our eyes: and thus far hear me, Cromwell;
And,—when I am forgotten, as I shall be;
And sleep in dull cold marble, where no mention
Of me more must be heard of,—say, I thought thee;
Say, Wolsey,—that once trod the ways of glory,
And sounded all the depths and shoals of honour,—
Found thee a way out of his wreck, to rise in;
A sure and safe one, though thy master miss'd it.
Mark but my fall, and that that ruin'd me,
Cromwell, I charge thee, fling away ambition;
By that sin fell the angels; how can man then,
The image of his Maker, hope to win by't?
Love thyself last: cherish those hearts that hate thee:
Corruption wins not more than honesty.
Still in thy right hand carry gentle peace,
To silence envious tongues. Be just and fear not;
Let all the ends, thou aim'st at, be thy country's,
Thy God's, and truth's; then if thou fall'st, O, Cromwell,
Thou fall'st a blessed martyr. Serve the king:
And,—Pr'ythee, lead me in:
There, take an inventory of all I have,
To the last penny; 'tis the king's: my robe,
And my integrity to heaven, is all
I dare now call my own. O, Cromwell, Cromwell,
Had I but serv'd my God with half the zeal
I serv'd my king, he would not in mine age
Have left me naked to mine enemies.

X. THE POWER OF MUSIC.

BY WILLIAM SHAKSPEARE.

How sweet the moon-light sleeps upon this bank!
Here will we sit, and let the sounds of music
Creep in our ears; soft stillness, and the night,
Become the touches of sweet harmony.
Sit, Jessica: Look, how the floor of heaven
Is thick inlaid with patterns of bright gold;
There's not the smallest orb, which thou behold'st,
But in his motion like an angel sings,
Still choiring to the young-eyed cherubims:
Such harmony is in immortal souls;
But, whilst this muddy vesture of decay
Doth grossly close it in, we cannot hear it.
. . . . . .
We are never merry when we hear sweet music.
The reason is our spirits are attentive:
For do but note a wild and wanton herd,
Or race of youthful and unhandled colts,
Fetching mad bounds, bellowing, and neighing loud,
Which is the hot condition of their blood;
If they but hear perchance a trumpet sound,
Or any air of music touch their ears,
You shall perceive them make a mutual stand,
Their savage eyes turn'd to a modest gaze,
By the sweet power of music: Therefore, the poet
Did feign that Orpheus drew trees, stones, and floods;
Since nought so stockish, hard, and full of rage,
But music for the time doth change his nature:
The man that hath no music in himself,
Nor is not mov'd with concord of sweet sounds,
Is fit for treasons, stratagems, and spoils;
The motions of his spirit are dull as night,
And his affections dark as Erebus:
Let no such man be trusted.

* Sir Thomas Cromwell.

XI. THE HAPPY MAN.

BY WILLIAM COWPER.

He is the happy man, whose life e'en now
Shows somewhat of that happier life to come;
Who, doomed to an obscure but tranquil state,
Is pleased with it, and, were he free to choose,
Would make his fate his choice; whom peace, the fruit
Of virtue, and whom virtue, fruit of faith,
Prepare for happiness; bespeak him one
Content indeed to sojourn while he must
Below the skies, but having there his home.
The world o'erlooks him in her busy search
Of objects, more illustrious in her view;
And, occupied as earnestly as she,
Though more sublimely, he o'erlooks the world.
She scorns his pleasures, for she knows them not;
He seeks not hers, for he has proved them vain.
He cannot skim the ground like summer birds
Pursuing gilded flies, and such he deems
Her honours, her emoluments, her joys.
Therefore in contemplation is his bliss,
Whose power is such, that whom she lifts from earth
She makes familiar with a world unseen,
And shows him glories yet to be revealed.

XII. THE MITHERLESS BAIRN.

BY WILLIAM THOM.

When a' ither bairnies are hush'd to their hame,
By aunty, or cousin, or frecky grand-dame,
Wha stands last an' lanely, an' sairly forfairn?
'Tis the pure dowie laddie—the mitherless bairn!

The mitherless bairnie creeps to his lane bed,
Nane covers his cauld back, or haps his bare head;
His wee hackit heelies are hard as the airn,
An' lithless the lair o' the mitherless bairn.

Aneath his cauld brow, siccan dreams hover there,
O' hands that wont kindly to kaim his dark hair!
But mornin' brings clutches, a' reckless an' stern,
That lo'e na the looks o' the mitherless bairn!

The sister wha sang o'er his softly rock'd bed,
Now rests in the mools where their mammie is laid;
While the father toils sair his wee bannock to earn.
An' kens na the wrangs o' his mitherless bairn.

Her spirit that pass'd in yon hour of his birth,
Still watches his lane lorn wand'rings on earth,
Recording in heaven the blessings they earn,
Wha couthilie deal wi' the mitherless bairn!

Oh! speak him na harshly—he trembles the while,
He bends to your bidding, he blesses your smile:—
In their dark hour o' anguish, the heartless shall learn,
That God deals the blow for the mitherless bairn!

XIII. OLD LETTERS! OH THEN SPARE THEM!

(*From the N. Y. Albion.*)

Old letters! Oh then spare them—they are priceless for their age!
I love—Oh how I love to see each yellow time-stained page!
They tell of joys that are no more, of hopes that long have fled;
Old letters! Oh then spare them—they are sacred to the dead!

They tell of times—of happy times—in years long, *long* gone by,
Of dear ones who have ceased to live but in the memory;
They picture many a bright, bright scene, in sunny days of yore,
Old letters! Oh then spare them, for they are a priceless store.

Old am I too, and grey-hair'd now—deserted and alone,
And all of those I once could call my friends, alas! are gone;
Yet oft at midnight's stilly hour, in solitude's retreat,
With each one in his silent tomb, I hold communion sweet.

Old letters! here is one—the hand of youth is on its face;
Ah! that was from a brother young in some far foreign place:
A sailor boy, beloved by all, frank, open-hearted, brave—
Cold, cold and lonesome is his rest beneath the Atlantic wave.

* * * * * *

Oh! ye are now the only links that bind us to the past;
Sweet, sweet memorials of the days too happy far to last;
The tear-drop fills again the eye whence tears had almost fled,
Old letters! ye are precious! ye are sacred to the dead!

XIV. HOME.

BY JAMES MONTGOMERY.

There is a land, of every land the pride,
Belov'd by heaven, o'er all the world beside;
Where brighter suns dispense serener light,
And milder moons emparadise the night;
A land of beauty, virtue, valour, truth,
Time-tutored age, and love exalted youth;
The wandering mariner, whose eye explores
The wealthiest isles, the most enchanting shores,
Views not a realm so bountiful and fair,
Nor breathes the spirit of a purer air.
In every clime the magnet of his soul,
Touch'd by remembrance, trembles to that pole;
Nor in this land of heaven's peculiar grace,
The heritage of nature's noblest race,
There is a spot of earth, supremely blest,
A dearer, sweeter spot than all the rest,
Where man, creation's tyrant, casts aside
His sword and sceptre, pageantry and pride,
While in his soften'd looks benignly blend,
The sire, the son, the husband, brother, friend:
Here woman reigns; the mother, daughter, wife,
Strews with fresh flowers the narrow path of life;
In the clear heav'n of her delightful eye
An angel-guard of loves and graces lie;
Around her knees domestic duties meet,
And fire-side pleasures gambol at her feet.
Where shall that land, that spot of earth, be found?
Art thou a man? a patriot? look around;
Oh, thou shalt find, howe'er thy footsteps roam,
That land thy country, and that spot thy home.

XV. THE IRISH MAIDEN'S SONG.

BY BERNARD BARTON.

Though Scotia's lofty mountains,
Where savage grandeur reigns;
Though bright be England's fountains,
And fertile be her plains;
When 'mid their charms I wander,
Of thee I think the while,
And seem of thee the fonder,
My own green isle!

While many who have left thee,
Seem to forget thy name,
Distance hath not bereft me
Of its endearing claim:
Afar from thee sojourning,
Whether I sigh or smile,
I call thee still "Mavourneen,"
My own green isle!

Fair as the glittering waters
Thy emerald banks that lave,
To me thy graceful daughters,
Thy generous sons as brave.
Oh! there are hearts within thee
Which know not shame or guile,
And such proud homage win thee,
My own green isle!

For their dear sakes I love thee,
Mavourneen, though unseen;
Bright be the sky above thee,
Thy shamrock ever green;
May evil ne'er distress thee,
Nor darken nor defile,
But heaven for ever bless thee,
My own green isle!

XVI. A PSALM OF LIFE.

What the Young Man said to the Psalmist.

BY H. W. LONGFELLOW.

Tell me not, in mournful numbers,
"Life is but an empty dream!"
For the soul is dead that slumbers,
And things are not what they seem.

Life is real! Life is earnest!
And the grave is not its goal;
"Dust thou art, to dust returnest,"
Was not spoken of the soul.

Not enjoyment, and not sorrow,
Is our destined end or way;
But to act, that each to-morrow,
Find us farther than to-day.

Art is long and time is fleeting,
And our hearts, though stout and brave,
Still, like muffled drums, are beating
Funeral marches to the grave.

In the world's broad field of battle,
In the bivouac of life,
Be not like dumb, driven cattle!
Be a hero in the strife!

Trust no future, howe'er pleasant!
Let the dead Past bury its dead!
Act,—act in the living Present!
Heart within and God o'erhead!

Lives of great men all remind us
We can make our lives sublime,
And, departing, leave behind us
Footprints on the sands of time:

Footprints, that perhaps another,
Sailing o'er life's solemn main,
A forlorn and shipwreck'd brother,
Seeing, shall take heart again.

Let us, then, be up and doing,
With a heart for any fate;
Still achieving, still pursuing,
Learn to labour and to wait.

XVII. BURIAL OF SIR JOHN MOORE.

BY THE REV. CHARLES WOLFE, A.B.

Not a drum was heard, nor a funeral note,
As his corse to the rampart we hurried;
Not a soldier discharged his farewell shot
O'er the grave where our hero we buried.

We buried him darkly at dead of night,
The sods with our bayonets turning,—
By the struggling moonbeam's misty light,
And the lantern dimly burning.

No useless coffin enclosed his breast,
Nor in sheet, nor in shroud, we wound him;
But he lay like a warrior taking his rest,
With his martial cloak around him.

Few and short were the prayers we said,
And we spoke not a word of sorrow;
But we steadfastly gazed on the face of the dead,
And we bitterly thought of the morrow.

We thought as we hollowed his narrow bed,
And smoothed down his lonely pillow,
That the foe and the stranger would tread o'er his head,
And we far away on the billow!

Lightly they'll talk of the spirit that's gone,
And o'er his cold ashes upbraid him;
But nothing he'll reck, if they'll let him sleep on
In the grave where a Briton has laid him.

But half of our heavy task was done,
When the clock told the hour for retiring;
And we heard the distant and random gun
That the foe was suddenly firing.

Slowly and sadly we laid him down,
From the field of his fame fresh and gory;
We carved not a line, and we raised not a stone,
But we left him alone in his glory!

XVIII. TWENTY YEARS AGO—THE SCHOOL-BOY'S REMINISCENCE.

I've wandered in the village, Tom,—I've sat beneath the tree,—
Upon the school-house playing-ground, which sheltered you and me,
But none were there to greet me, Tom, and few were left to know,
That played with us upon the green, some twenty years ago.

The grass is just as green, Tom,—barefooted boys at play
Were sporting just as we did then, with spirits just as gay;
But the master sleeps upon the hill, which, coated o'er with snow,
Afforded us a sliding place, just twenty years ago.

The old school-house is altered now, the benches are replaced
By new ones very like the same our penknives had defaced;
But the same old bricks are in the wall, the bell swings to and fro,
Its music just the same, dear Tom, as twenty years ago.

The spring that bubbled 'neath the hill, close by the spreading beech,
Is very low—'twas once so high that we could almost reach;
And kneeling down to get a drink, dear Tom, I started so,
To see how much that I had changed since twenty years ago.

Near by the spring, upon the elm, you know I cut your name,—
Your sweetheart's just beneath it, Tom—and you did mine the same,
Some heartless wretch hath peeled the bark—'twas dying sure, but slow,
Just as the one whose name we cut, died twenty years ago.

My eyelids had been dry, Tom, but tears come in my eyes,
I thought of her I loved so well—those early broken ties,—
I visited the old church-yard, and took some flowers to strew
Upon the graves of those we loved some twenty years ago.

And some are in the church-yard laid—some sleep beneath the sea,
But few are left of our old class, excepting you and me;
And when our time shall come, Tom, and we are called to go,
I hope they'll lay us where we played just twenty years ago. —*Anonymous.*

XIX. THE BLIND BOY'S BEEN AT PLAY, MOTHER.*

(*By Eliza Cook.*)

The Blind Boy's been at play, Mother,
And merry games we had;
We led him on our way, mother,
And every step was glad.
But when we found a starry flower,
And praised its varied hue,
A tear came trembling down his cheek,
Just like a drop of dew.

We took him to the mill, mother,
Where falling waters made
A rainbow o'er the rill, mother,
As golden sun-rays played;
But when we shouted at the scene,
And hailed the clear blue sky,
He stood quite still upon the bank,
And breathed a long, long sigh.

We asked him why he wept, mother,
Whene'er we found the spots
Where the periwinkle crept, mother,
O'er wild Forget-me-not's;
"Ah me!" he said, while tears ran down
As fast as summer showers,
"It is because I cannot see,
The sunshine and the flowers."

Oh, that poor sightless boy, mother,
Has taught me I am blest,
For I can look with joy, mother,
On all I love the best;
And when I see the dancing stream,
And daisies red and white,
I kneel upon the meadowed sod,
And thank my God for sight.

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* Many of the following pieces are inserted for recitation by girls.

XX. WHY DO THE FLOWERS BLOOM, MOTHER?

(*By J. E. Carpenter.*)

"Why do the flow'rets bloom, mother,
Why do the sweet flowers bloom;
And brightest those we rear'd, mother,
Around my brother's tomb?"
To fill the world with gladness,
My child, were flow'rets given,—
To crown the earth with beauty,
And show the road to Heaven!"

"Then why do the flow'rets fade, mother,
Why do the sweet flowers fade,
When winter's dreary cloud, mother,
Earth's brighter scenes pervade?
My child, those flow'rs that wither,
Have seeds that still remain,
That the sunshine and the summer
Restore to life again!

"And shall not those that die, mother,
Come back to life once more,
E'en as the rain and sun, mother,
Those beauteous flow'rs restore?"
Yes,—yes, my child, such powers
To human flow'rs are given,
Here earth's frail flow'rs may blossom,
But we may rise—*in Heaven!*"

XXI. INFANTINE INQUIRIES.

(*By William P. Brown.*)

"Tell me, O mother! when I grow old,
Will my hair, which my sisters say is like gold,
Grow grey as the old man's, weak and poor,
Who ask'd for alms at our pillar'd door?
As he, when he told us his tale of woe?
Will my hand then shake, and my eyes be dim?
Tell me, O mother! will I grow like him?

"He said—but I know not what he meant—
That his aged heart with sorrow was rent;
He spoke of the grave as a place of rest,
Where the weary sleep in peace and are blest;
And he told how his kindred there were laid,
And the friends with whom in his youth he play'd.
And tears from the eyes of the old man fell,
And my sisters wept as they heard his tale!

"He spoke of a home, where in childhood's glee
He chased from the wild flowers the singing bee;
And follow'd afar, with a heart as light
As its sparkling wings, the butterfly's flight;
And pull'd young flowers, where they grew 'neath the beams
Of the sun's fair light, by his own blue streams:—
Yet he left all these, through the earth to roam!
Why, O mother! did he leave his home?"

"Calm thy young thoughts, my own fair child!
The fancies of youth and age are beguiled;
Though pale grow thy cheeks and thy hair turn gray,
Time cannot steal the soul's youth away!
There is a land of which thou hast heard me speak,
Where age never wrinkles the dweller's cheek!
But in joy they live, fair boy! like thee:
It is *there* the old man long'd to be!"

"For he knew that those with whom he had play'd,
In his heart's young joy, 'neath their cottage shade—
Whose love he shared, when their songs and mirth
Brightened the gloom of this sinful earth—
Whose names from our world had passed away,
As flowers in the breath of an autumn day—
He knew that they, with all suffering done,
Encircled the throne of the Holy One!

"Though ours be a pillar'd and lofty home,
Where want with his pale train never may come,
Oh! scorn not the poor with the scorner's jest,
Who seek in the shade of our hall to rest;
For He who hath made them poor may soon
Darken the sky of our glowing noon,
And leave us with woe in the world's bleak wild!
Oh! soften the griefs of the poor, my child!"

XXII. THE DYING BOY.

(*Anonymous.*)

It must be sweet in childhood, to give back
The Spirit to its Maker ; ere the heart
Has grown familiar with the paths of sin
And sown—to garner up its bitter fruits.
—I knew a boy whose infant feet had trod
Upon the blossoms of some seven springs,
And when the eighth came round and called him out
To revel in its light, he turned away,
And sought his chamber to lie down and die.
'Twas night—he summoned his accustomed friends,
And, in this wise, bestowed his last bequest:

"Mother, I'm dying now!
There is deep suffocation in my breast,
As if some heavy hand my bosom pressed ;
And on my brow

I feel the cold sweat stand ;
My lips grow dry and tremulous, and my breath
Comes feebly up. O, tell me is this death?
Mother, your hand—

Here—lay it on my wrist
And place the other thus beneath my head,
And say, sweet mother, say, when I am dead,
Shall I be missed?

Never beside your knee
Shall I kneel down again at night to pray,
Nor with morning wake and sing the lay
You taught to me.

Oh, at the time of prayer,
When you look round and see a vacant seat;
You will not wait then for my coming feet:
You'll miss me there!"

"Father—I'm going home!
To the good home you spoke of, that blest land
Where it is one bright summer always, and
Storms do never come.

I must be happy then,
From pain and death you say I shall be free;
That sickness never enters there, and we
Shall meet again!"

"Brother—The little spot
I used to call my garden, where long hours
We've stayed to watch the budding things and flowers.
Forget it not.

Plant there some box or pine;
Something that grows in winter, and will be
A verdant offering to my memory,
And call it mine!"

"Sister—The young rose tree—
That all the Spring has been my pleasant care,
Just putting out its leaves so green and fair,
I give to thee.

And when its roses bloom—
I shall be gone away, my short life done ;
But will you not bestow a single one
Upon my tomb?"

"Now, mother, sing the tune
You sang last night; I'm weary, and must sleep."
"Who was it called my name? Nay, do not weep,
You'll all soon come!"

Morning spread over earth her rosy wings
And that meek sufferer, cold and ivory pale,
Lay on his couch asleep. The gentle air
Came through the open window, freighted with
The savoury labours of the early spring—
He breathed it not. The laugh of passers by
Jarr'd like a discord in some mournful tune,
But marr'd not his slumbers. *He was dead.*

XXIII. A MOUND IS IN THE GRAVE YARD.

(*By Mrs. Judson.*)

1.

A mound is in the grave yard,
A short and narrow bed ;
No grass is growing on it,
And no marble at its head :
Ye may go and weep beside it,
Ye may kneel, and kiss the sod,
But ye'll find no balm for sorrow,
In the cold and silent clod.

2.

There is anguish in the household,
It is desolate and lone,
For a fondly cherished nursling,
From the parent nest has flown:
A little form is missing,
A heart has ceased to beat;
And the chain of love lies shattered,
At the desolator's feet.

3.

Remove the empty cradle,
  His clothing put away:
And all his little play-things,
  With your choicest treasures lay;
Strive not to check the tear-drops,
  That fall like summer rain,
For the sun of hope shines through them!—
  Ye shall see his face again.

4.

Oh! think where rests your darling!
  Not in his cradle bed;
Not in the distant grave yard,
  With the still and mouldering dead;
But in a heavenly mansion,
  Upon a Saviour's breast,—
With his "brother's" arms around him,
  He takes his sainted rest!

5.

He has put on his robes of glory,
  For the little robes ye wrought;
And he fingers golden harp strings,
  For the toys his mother bought;
Oh! weep! but with rejoicing;
  A heart-gem have ye given,
And behold its glorious setting,—
  In the diadem of heaven.

XXIV. BIRDS OF PASSAGE.

BY MRS. HEMANS.

Birds, joyous birds of the wandering wing!
Whence is it ye come with the flowers of spring?
—"We come from the shores of the green old Nile,
From the land where the roses of Sharon smile,
From the palms that wave through the Indian sky,
From the myrrh-trees of glowing Araby.

We have swept o'er the cities in song renown'd,
Silent they lie with the deserts round!
We have crossed proud rivers, whose tide hath roll'd
All dark with the warrior blood of old;
And each worn wing hath regain'd its home,
Under peasant's roof-tree or monarch's dome."

And what have you found in the monarch's dome,
Since last ye traversed the blue sea's foam?
—"We have found a change, we have found a pall,
And a gloom o'ershadowing the banquet's hall,
And a mark on the floor as of life-drops spilt,
Nought looks the same, save the nest we built!"

Oh! joyous birds, it hath still been so;
Through the halls of kings doth the tempest go!
But the huts of the hamlet lie still and deep,
And the hills o'er their quiet a vigil keep,—
Say what have you found in the peasant's cot,
Since last ye parted from that sweet spot?

—"A change we have found there—and many a change!
Faces, and footsteps, and all things strange!
Gone are the heads of the silvery hair,
And the young that were have a brow of care,
And the place is hush'd where the children play'd,
Nought looks the same, save the nest we made!"

Sad is your tale of the beautiful earth,
Birds that o'ersweep it, in power and mirth!
Yet through the wastes of the trackless air,
Ye have a Guide, and shall we despair?
Ye over desert and deep have pass'd,
So may we reach our bright home at last.

XXV. THE BETTER LAND.

BY MRS. HEMANS.

"I hear thee speak of the better land.
Thou call'st its children a happy band:
Mother! oh, where is that radiant shore?
Shall we not seek it, and weep no more?
Is it where the flower of the orange blows,
And the fire-flies glance through the myrtle boughs?"
—"Not there, not there, my child!"

"Is it where the feathery palm trees rise,
And the date grows ripe under sunny skies?
Or midst the green islands of glittering seas,
Where fragrant forests perfume the breeze,
And strange bright birds on their starry wings
Bear the rich hues of all glorious things?"
—"Not there, not there, my child!"

"Is it far away in some region old
Where the river wanders o'er sands of gold?
Where the burning rays of the ruby shine,
And the diamond lights up the secret mine,
And the pearl gleams forth from the coral strand;—
Is it there, sweet mother, that better land?"
—"Not there, not there, my child!"

"Eye hath not seen it, my gentle boy!
Ear hath not heard its deep tones of joy,
Dreams cannot picture a world so fair—
Sorrow and death may not enter there;
Time doth not breathe on its fadeless bloom:
Far beyond the clouds and beyond the tomb,
—It is there, it is there, my child!"

XXVI. NEVER GIVE UP.

Never give up 'tis the secret of glory,
Nothing so wise can philosophy teach,
Think on the names that are famous in story;
Never give up is the lesson they preach:
How have men compassed immortal achievements;
How have they moulded the world to their will?
'Tis but midst dangers and sorest bereavements;
Never give up was their principle still.

—*Anonymous.*

APPENDIX.

NEW BRICK SCHOOL HOUSE, SIMCOE, COUNTY OF NORFOLK.

The accompanying drawings illustrate designs made by Messrs. Messer & Jones, architects, Toronto, in reply to an advertisement by the School Trustees of the Town of Simcoe, County of Norfolk, for "A two-story brick school house; cost of the building not to exceed £1,700: accommodation required for 500 or 600 children;" and to be built on a block of ground two acres in extent, near the town.

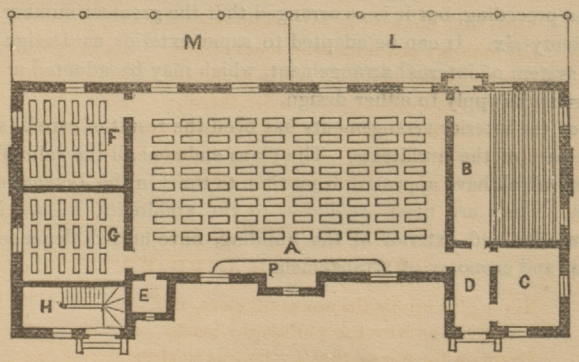
Thirteen designs were sent in from various parts of Canada and the United States; from which, Design No. 1, as shewn by ground-plan and perspective view,* was chosen.

The building is designed in the Old English style,—the most appropriate for a red brick building,—and is finished with Ohio stone dressings. The overhanging roofs afford protection to the walls. The windows are covered with hoods, which shade them, making the light free from the glare of sunshine, and being glazed in small squares, are less liable to be broken.

An entirely separate entrance is provided for boys and girls: the whole of the ground floor being appropriated to the use of the latter. The cloak-room C, which is next to the entrance hall, is provided with two doors, so that there may be no crowding when school is dismissed. The doors to the school and class-rooms are made to open outwards, in accordance to the suggestions contained in the *Journal of Education* for December, 1851, pp. 180, 181. In case of a panic in the schoal this arrangement will be found most desirable.

The gallery-room C will accommodate 120 pupils, and has a door, protected by a porch, opening on the covered play-ground. The gallery-room is an important feature in the construction of school houses, and its adoption has been strongly urged by the school authorities of Upper Canada, in various numbers of the *Journal of Education*. It has been found of essential service in the Model Schools, Toronto; see page 8.

The large school-room accommodates 160 pupils, with fixed seats and desks, like those manufactured by Jacques & Hay, Toronto, under the sanction of the Educational Department for Upper Canada [see pages 74–78]; and each class-room opening off it has similar desks and seats for thirty-six pupils.



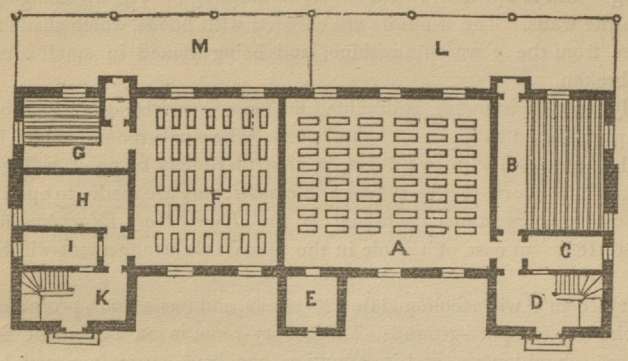
GROUND PLAN.—DESIGN NO. 1.

A Girls' School.
B Gallery Room.
C Cloak Room.
D Entrance Hall.
E Book or Library Room.
F G Class Rooms.
H Staircase to Boys' School.
L M Covered Play Shed.
P Platform.

*These plans were prepared after the architectural sheets of this pamphlet were printed. The front perspective will be found on the second page of the cover.

The boys enter the door in the left wing, and ascend a broad staircase to the second floor, where there is a large school-room, with seats for 160 pupils; two class-rooms for 48 pupils each; a gallery for 112 pupils; and a large cloak room. The bell-tower E contains book-closets or library rooms on each floor, with the bell-rope leading down into them.

The basement is 6 ft. 6 in. high. The whole area of the building has been excavated, so that any system of heating may be adopted. The rooms on the ground floor are 14 ft. high. The large room on the upper floor has an open roof, 17 ft. to the ceiling, and the class-rooms a height of 14 ft. All the rooms are ventilated by flues in the walls, carried up into the roof, from whence the foul air escapes by means of a open ventilator on the ridge.



GROUND PLAN.—DESIGN NO. 2.

A Girls' School.
B Gallery or Infants' School.
C Cloak Room.
D Staircase.
E Book or Library Room.
F Boys' School.
G Gallery Room.
H Class Room.
I Cloak Room.
K Staircase.
M L Covered Playground.

Design No. 2, of which the ground plan only is given, accommodates the same number of pupils as the preceding, but it is so arranged that the greatest number of pupils in any one room is ninety-six. It can be adapted to same exterior as Design No. 1, and presents another system of internal arrangement, which may be adopted at pleasure. The same general remarks apply to either design.

The whole of the interior arrangements has been the result of careful study and examination on the part of the architects. The plans embrace all the valuable improvements and suggestions which have appeared, from time to time, in the *Journal of Education* for Upper Canada. They are most creditable to the architects, Messrs. Messer & Jones, who, in the interior and exterior of the building, have united elegance of design with appropriateness and economy of arrangement.

TORONTO:

PRINTED BY LOVELL & GIBSON, CORNER OF YONGE AND MELINDA STREETS.

THE

GEOGRAPHY AND HISTORY

OF

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AND OF THE

OTHER COLONIES OF THE EMPIRE;

TO WHICH ARE ADDED

A SKETCH OF THE VARIOUS INDIAN TRIBES OF CANADA, AND BRIEF BIOGRAPHICAL NOTICES OF EMINENT PERSONS CONNECTED WITH THE HISTORY OF CANADA.

BY J. GEORGE HODGINS, M.A.

Illustrated with Seventy-Four Engravings on Wood.

NOTE.

Extract from the Minutes of the Council of Public Instruction for Upper Canada, dated 4th December, 1857:—

"The Council hail with satisfaction a work so much needed in the country, and order that it be used in the Normal and Model Schools. The Council also recommend its use in the Public Schools of Upper Canada."

Extract from the notice of the work in the August No. (1857) *of the Journal of Education for Lower Canada, page* 123:—

"This is a very complete and interesting little work, which the Superintendent of Education for Lower Canada has placed on his list of Prize Works for Schools."

*** *This work has also been adopted as an elementary Text Book in Upper Canada College, the Collegiate School of Victoria College, in many of our best Seminaries, and other Schools.*

TORONTO:
MACLEAR & CO., JAS. CAMPBELL, AND AT THE EDUCATIONAL DEPOSITORY.